

JD Edwards EnterpriseOne

Development Client Installation Guide

9.2

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Preface

Welcome to the JD Edwards EnterpriseOne documentation.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Related Information

For additional information about JD Edwards EnterpriseOne applications, features, content, and training, visit the JD Edwards EnterpriseOne pages on the JD Edwards Resource Library located at:

<http://learnjde.com>

Conventions

The following text conventions are used in this document:

Convention	Meaning
Bold	Boldface type indicates graphical user interface elements associated with an action or terms defined in text or the glossary.
<i>Italics</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
Monospace	Monospace type indicates commands within a paragraph, URLs, code examples, text that appears on a screen, or text that you enter.
> Oracle by Example	Indicates a link to an Oracle by Example (OBE). OBEs provide hands-on, step-by-step instructions, including screen captures that guide you through a process using your own environment. Access to OBEs requires a valid Oracle account.

2 Introduction

Overview

The JD Edwards EnterpriseOne Development Client (also known as a Web Development Client, "Fat" Client, Administrative Client, Windows client, or Workstation) contains components that run as standard Microsoft Windows applications (for example, Active Console, Forms Design Aid (FDA), and Report Design Aid (RDA)) and components that run in a web browser.

Note: This document uses the following terminology when discussing JD Edwards EnterpriseOne clients:

- Web Client
Components that run in a web browser.
- Development Client
Composed of standard Windows components and Web Client.

The following are the supported Application Servers:

- Oracle WebLogic Server (WLS)
- IBM WebSphere Application Server (WAS) Express or WebSphere Application Server for Developers.

For Oracle WebLogic Servers, you should install the supported version as indicated by the Certifications for the Development Client. The version of the Web Client that is installed on WLS is WLSH4A.

Note: Tools Release 9.2 Update 2. The existing installer H4A85 is renamed to WASH4A and is enhanced to support IBM WebSphere 9.0 along with existing support of IBM WAS 8.5.5.

For WebSphere Application Servers, you can choose to use WAS Express or WAS for Developers as the Application Server for the EnterpriseOne Web Client. Both products are similar; either one may be manually installed before installing the Web Client for WAS. Whereas WAS Express requires a licensing fee to IBM, WAS for Developers is free. The version of the Web Client that is installed on either WAS product is referred to by either of these names:

- HTML for Applications, or
- WASH4A

CAUTION: The Web Client part of the Development Client runs inside an Application Server. Because the Development Client installer both configures and depends on them for some components, these Application Servers must be installed prior to installing the JD Edwards EnterpriseOne Development Client.

The first time setup of the JD Edwards EnterpriseOne Development Client installer and installation package on an EnterpriseOne Deployment Server is described in a separate guide entitled: *JD Edwards EnterpriseOne Deployment Server Reference Guide*. This setup on the Deployment Server must be done before a user can install a JD Edwards EnterpriseOne Development Client on a workstation. The installation package specifies the components to install and

may or may not include the Web Client. To access the *JD Edwards EnterpriseOne Deployment Server Reference Guide*, refer to the Installation and Upgrade Documentation library at this link:

http://docs.oracle.com/cd/E24902_01/nav/reference.htm

Note: This document uses the terms "deinstall" and "uninstall" interchangeably. The terms are synonymous and describe the removal of a product from your workstation.

Certifications

Customers must conform to the supported platforms for the release as detailed in the JD Edwards EnterpriseOne Certifications. In addition, JD Edwards EnterpriseOne may integrate, interface, or work in conjunction with other Oracle products. Refer to the following link for cross-reference material in the Program Documentation for Program prerequisites and version cross-reference documents to assure compatibility of various Oracle products.

<http://www.oracle.com/corporate/contracts/index.html>

Refer to the Certifications tab on My Oracle Support and search for this product:

- **JD Edwards EnterpriseOne Development Client**

For additional information on using Certifications, refer to this document on My Oracle Support (<https://support.oracle.com>):

- **Certifications FAQ for JD Edwards EnterpriseOne [Article ID 1525328.1]**

<https://support.oracle.com/epmos/faces/DocumentDisplay?id=745831.1>

Microsoft Windows Security

When installing, uninstalling/deinstalling, or running any JD Edwards EnterpriseOne product on Microsoft Windows operating systems, be sure to follow the below guidelines. This includes saving or restoring or deleting snapshots of EnterpriseOne using the SnapShot program. Not following these guidelines may cause unexpected errors to occur.

1. Registry and directory permissions

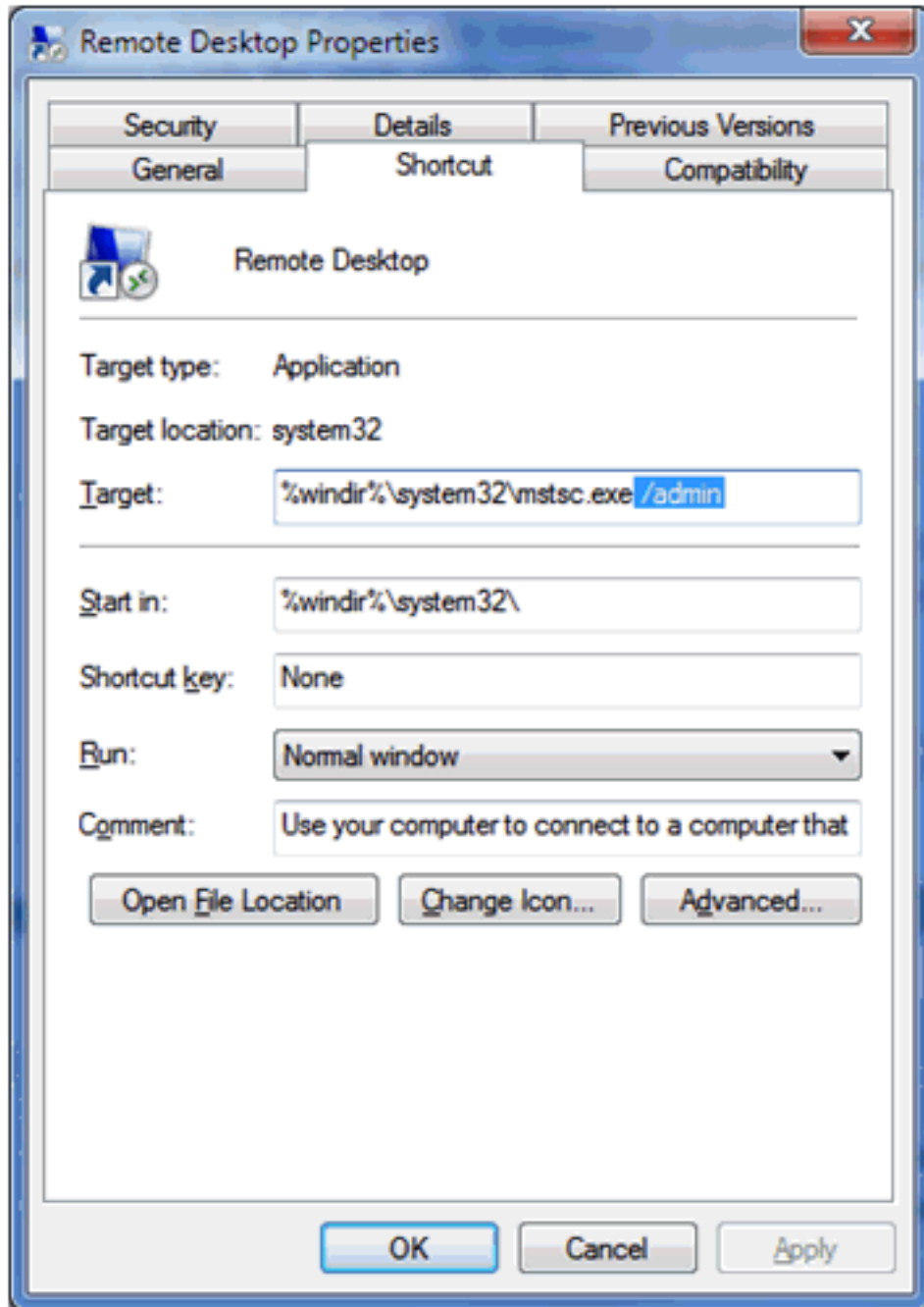
Be sure that the user account into which you are signing into Microsoft Windows is in the Administrators group or a similar group that provides permissions to write to and read from registry hives (for example, HKEY_LOCAL_MACHINE\SOFTWARE) and disk subdirectories (c:\Windows) that are restricted from standard Windows users.

2. Remote Desktop connections

When connecting to a remote Microsoft Windows computer using Microsoft's Remote Desktop, run Remote Desktop with the "/admin" flag. Not running with this setting may cause subtle, hard-to-explain errors in the program. You can do this using these steps:

- a. Right-click on the Remote Desktop shortcut.
- b. Select properties.
- c. Click on the Shortcut tab.

- d. At the end of the Target field, add a space, a forward slash, and the string **admin** to the end of the Target. The screen shot sample below illustrates this setting:



Minimizing Locked Files

To minimize the possibility that the Development Client's installer or uninstaller or SnapShot might fail due to locked files, follow these guidelines:

1. Exit from all running programs. You can use Microsoft Windows Task Manager to verify that the programs are stopped. In particular, be sure that EnterpriseOne, JDeveloper, and SQL Developer are stopped, but other programs may also need to be stopped. Exceptions to this rule include the database service(s) which should be running.
2. Verify that no files in the Development Client installation directory or subdirectories are open in any file editors.
3. Verify that neither the installation directory nor any of its subdirectories are open in Microsoft Windows Explorer.
4. Verify that no Command Prompt window has as its current working directory either the Development Client installation directory or any of its subdirectories.

3 Understanding the Development Client Installation

Understanding Installation Steps

Installation of the Development Client involves the following sequential steps, each of which are described in the following sections and chapters:

1. Understanding the Destination Paths of Oracle Products, also called Oracle Homes
2. Understanding Important Notes
3. Installing Prerequisites for the Development Client
 - o Compiler, linker, and Software Development Kit (SDK)
 - o Application server
 - o Database client
 - o Browser
 - o Oracle JDeveloper

This is optional and only required for developing BSSVs (Business Services) which are also known as SBFs (Service Business Functions) or Java Business Functions.

With the exception of the browser and Oracle JDeveloper, the other components listed above are covered in this document. The specific versions of these products are specified in the Oracle JD Edwards EnterpriseOne Certifications (refer to the section of this guide entitled: *Certifications*).

Understanding the Destination Paths of Oracle Products

Each Oracle product that is installed on a machine is installed into an **Oracle Home** directory or path. This is a directory that contains most of the files associated with the product. This path has a user-supplied name as well. You can specify a name that is intuitive so you do not have to remember the path. The parent directory of the Oracle Home directory is called the Oracle Base directory or path.

The following table shows some examples of these terms for the installations of an Oracle WebLogic Server, an Oracle database, Oracle JDeveloper, and JD Edwards EnterpriseOne Development Client.

Note: It is strongly recommended that you always install each Oracle product into its own **Oracle Base Path**. Attempting to share an **Oracle Base Path** among multiple Oracle products may cause unforeseen errors either during installation or at runtime.

Oracle Product	Installation Directory	Oracle Base Path	Oracle Home Path	Oracle Home Name
WebLogic Server	C:\WebLogic\WLS12c	C:\WebLogic	C:\WebLogic\WLS12c	WebLogic_Home
JDDeveloper	C:\Oracle2\Middleaware	C:\Oracle2	C:\Oracle2\Middleware	JDev_Home
JD Edwards EnterpriseOne	C:\Oracle3\E920	C:\Oracle3	C:\Oracle3\E920_1	JDE_E920_Client

During the installation of an Oracle product, OUI copies the files from the package to subdirectories under the Oracle Home path and then performs the necessary configurations. In addition, it places a copy of OUI into the Oracle Home Path.

OUI also creates a submenu of items in the Start / All Programs menu. This submenu is named "Oracle - <Oracle_Home_Name>" where <Oracle_Home_Name> is the name that the user specified during the installation. This submenu will include links to some of the product's programs and the submenu called Oracle Installation Products. Oracle Installation Products includes a link to the copy of OUI that is in the Oracle Home Path. Although you can run other copies of OUI to uninstall (remove) the EnterpriseOne Development Client, it is safest to uninstall using the link in this submenu.

Important Notes

Refer to the following important notes regarding the overall installation of a Development Client.

CAUTION: Please verify all Certifications for supported versions of third party software. See the section *Certifications*.

1. For Releases 9.2.1.0 and 9.2.2.1, refer to MOS Doc ID [2207529.1](#) for directions on installing the requisite JRE version prior to running the Development Client Installer.

For Release 9.2.1.2 and above, OUI installs its own Java Runtime Environment (JRE) so one is not required to be present before OUI is run. However, OUI will attempt to use any Java-related Microsoft Windows environment variables that are set before it is run. Examples of some Java environment variables are **JAVA_HOME**, **JAVA_TOOL_OPTIONS**, and **_JAVA_OPTIONS**. If any of these are set to invalid values, OUI may fail to run, or it may fail during the installation. Be sure to either validate these environment variables or delete them before running OUI.

2. Microsoft Visual Studio is not required unless you are building business functions on the Development Client. If you plan to build business functions, you will need the compiler and additional libraries that Visual Studio and Windows Software Development Kit (SDK) provides.
3. Verify that all previous releases of JD Edwards EnterpriseOne (Development and Standalone) Clients have been completely uninstalled or saved via SnapShot before installing a new Development or Standalone Client. For instructions on how to uninstall the Development Client, refer to the section of this guide entitled: *Uninstalling the Development Client*.
4. The Development Client does not require Software Protection Codes (SPCs) to run so you will not need to perform the steps for applying SPCs that previous EnterpriseOne releases required.

5. The EnterpriseOne Development Client does not use a local database (E1Local, OEE) in Tools Release 9.2.5 and forward.
 - a. There is no need to install OEE on a workstation on which only 9.2.5.0 or higher Tools Releases will be used.
 - b. If OEE is already installed:
 - Keep it installed if snapshots from earlier Tools Releases need it.
 - Uninstall it if not being used.
 - c. A workstation can have both EnterpriseOne instances that use OEE and instances that do not use OEE.
 - Only one active EnterpriseOne instance at a time is in a runnable state.
 - Inactive EnterpriseOne instances should be saved via Snapshot.
 - d. Snapshot supports EnterpriseOne instances that use OEE as well as instances that do not use OEE.
 - e. Be sure to use the latest Snapshot.exe available.
6. The Development Client sign on uses this JD Edwards EnterpriseOne application:

Work with User Spec Objects Eligible for Delete

- a. The **Work with User Spec Objects Eligible for Delete** application displays objects that are not checked out to the user. You can cancel out of the form and retain your user specs or select records to delete.
- b. If there are user specs, runtime will run off the user specs.
- c. If there are NO user specs, runtime will run off the package specs.
- d. If the object is not checked out to the user, the latest specs for that object are in the package that the user just installed (in the package specs).
- e. If the package specs have the latest specs for the object, there is no need to retain the user specs records for that objects.
- f. If the package name and pathcode does not reside in F98825 you will not be able to log on.
- g. If there is an object that is frequently changed and you have modifications for that object you use for testing, you may want to keep the user spec.

Installing Compiler, Linker, and Software Development Kit (SDK)

This section describes these topics:

- *Understanding the Requirements for JD Edwards EnterpriseOne*
- *Obtaining and Installing Visual Studio and the Microsoft Windows SDK*
- *Updating the jde.ini File*

Understanding the Requirements for JD Edwards EnterpriseOne

As with previous releases of JD Edwards EnterpriseOne, you must install specific versions of the Microsoft Visual Studio runtime libraries or the Visual Studio product itself before you can run the installer for the Development Client. Visual Studio runtime libraries provide the support files for C and C++ based programs to run. The Visual Studio product includes these runtime libraries as well as a compiler and linker which can be used to build JD Edwards EnterpriseOne installable packages.

JD Edwards EnterpriseOne Tools (foundation) and Applications (business functions) are built with different releases of Visual Studio; hence, they each require specific installations of the Visual Studio runtime libraries or product.

You should check Oracle Certifications for the most current specifications for supported releases of Visual Studio for your Tools Release and Applications Release. Refer to *Certifications* in this guide.

The Visual Studio runtime libraries (which are partial products with no development tools) for each supported release of Visual Studio are freely available from the Microsoft Download Center. The complete Visual Studio product (which includes the runtime and the compiler and associated tools) must be purchased and licensed from Microsoft.

Note: Only 32-bit versions of Visual Studio runtime libraries are supported for use with JD Edwards EnterpriseOne. Note these Microsoft product attributes:

- The Microsoft Download Center designates 32-bit versions of software with the term **x86**.
- The Visual Studio product comes with both 32- and 64-bit versions of the runtime libraries.
- When searching the Microsoft Download Center for a particular product, you may need to use these search terms: **Visual Studio** or **Visual C++**.

Obtaining and Installing Visual Studio and the Microsoft Windows SDK

You should only install Microsoft Visual Studio on operating systems supported both by Microsoft Visual Studio and Oracle JD Edwards. Refer to the Oracle Certification system on support.oracle.com for the latest service packs, releases, and operating systems supported with Visual Studio (the information will be under the JD Edwards EnterpriseOne Deployment Server and JD Edwards EnterpriseOne Development Client products).

As of the GA of Tools and Applications Release 9.2.3 these links and navigation to the microsoft.com web site are valid:

Visual Studio 2010 Redistributable

Microsoft.com > Downloads > Search > Microsoft Visual C++ 2010 Redistributable Package (x86)

<http://www.microsoft.com/en-us/download/details.aspx?id=5555>

Tip: Some Microsoft Windows systems may already have the Visual Studio 32-bit 2010 redistributable installed, either manually or by some other Microsoft product installation. Users can determine if this version already exists in Control Panel > Programs and Features > Microsoft Visual C++ 2010 x86 Redistributable.

Visual Studio 2013 Redistributable

Microsoft.com > Downloads > Search > Microsoft Visual C++ 2013 Redistributable Package (x86)

<https://www.microsoft.com/en-us/download/details.aspx?id=40784>

Visual Studio 2013 Download and Windows SDK

Note: You need the Visual Studio 2013 download, which is a licensed product from Microsoft, if you plan on building packages on the Development Client. An additional package build requirement is the Windows SDK, which is a freely available program from Microsoft.

Visual Studio Download

Microsoft.com > Downloads > Search > Microsoft Visual C++ 2013 Download

<https://www.visualstudio.com/en-us/downloads/download-visual-studio-vs.aspx>

Windows Software Development Kit for Windows 8.1

Note: Although the SDK download is labeled as Microsoft Windows 8.1, the same download is applicable to both Windows Client 8.1 and Windows Server 2012. This SDK is specifically required for any Windows-based machine that is building JD Edwards EnterpriseOne packages.

Microsoft.com > Downloads > Search > Windows Software Development Kit for Windows 8.1

<https://msdn.microsoft.com/en-us/windows/desktop/bg162891.aspx>

Visual Studio 2017 Redistributable

All downloads > Other Tools and Frameworks > Microsoft Visual C++ Redistributable for Visual Studio 2017.

<https://visualstudio.microsoft.com/downloads/>

Visual Studio 2017 Download and Windows SDK

Note: If you plan on building packages on the Development Client, you must download Visual Studio 2017 and Windows SDK 10 download, which are licensed products from Microsoft.

Visual Studio Download

<https://visualstudio.microsoft.com/downloads/>

Windows Software Development Kit for Windows 10 Version 10.0.15063

<https://developer.microsoft.com/en-us/windows/downloads/sdk-archive>

Visual Studio 2022 Download and Windows SDK

Note: If you plan on building packages on the Development Client, you must download Visual Studio 2022 and Windows SDK 10.0.17763.0, which are licensed products from Microsoft.

Visual Studio Download

<https://visualstudio.microsoft.com/downloads/>

Windows Software Development Kit Version 10.0.17763.0

<https://developer.microsoft.com/en-us/windows/downloads/sdk-archive>

Updating the jde.ini File

If you have installed Visual Studio in order to build packages on the Development Client, ensure this section and setting exists and is correct in the `jde.ini` file on the Development Client. You must specify the supported version as listed in

Oracle Certifications for JD Edwards EnterpriseOne. For example, if the supported version of Visual Studio is 2022, you would specify that version as shown below:

```
[JDE_CG]
Copy
VisualStudioVersion=2022
```

No other settings for Visual Studio need to be applied in the `jde.ini` file.

4 Installing the Application Server: Oracle WebLogic Server 12.1.3, 12.2.1, and 14.1.1

Installing the Application Server: Oracle WebLogic Server 12.1.3, 12.2.1, and 14.1.1

The Web Client part of the EnterpriseOne Development Client requires that an application server is installed. An application server processes requests from a browser and returns results to the browser to be displayed to the user.

The Development Client supports these application servers from Oracle and IBM:

- Oracle WebLogic Server (abbreviated WLS)
- IBM WebSphere Express Server (abbreviated WAS)
- IBM WebSphere Server for Developers (also abbreviated WAS)
- IBM WebSphere Application Server (also abbreviated WAS)

This chapter describes how to install WebLogic Server. These procedures must be followed only if you are using WebLogic Server for the WLSH4A web client.

Note: You can skip this chapter if you are using the WebSphere Express, WebSphere for Developers, or WebSphere 9.0 for the WASH4A web client. The installation of all these products is described in the next chapter of this guide. This document covers installations for WebLogic Server version 12c (also known as 12.1.3 and 12.2.1) and version 14c (14.1.1). Follow the Oracle Certifications to determine which version is supported for your particular environment.

CAUTION: These instructions apply **ONLY** to a JD Edwards EnterpriseOne Development Client. They do **NOT** apply to other JD Edwards EnterpriseOne machines that use WebLogic Server, such as the Deployment Server, Server Manager, HTML Server, or browsers connected to the HTML server.

Installing a JDK for WebLogic Server

Before you can install WebLogic Server itself, you must have a Java Development Kit (JDK) installed on your Development Client. You should always refer to the Oracle Certifications for the current specifications for the specific use case of WebLogic Server and its required JDK on the JD Edwards EnterpriseOne Development Client.

Note: The bitness of the JDK with which WebLogic Server is installed and run **MUST MATCH** the bitness of the JD Edwards EnterpriseOne Development Client.

Tip: WebLogic Server 12.1.3. When downloading the JDK installer for WebLogic Server 12.1.3, choose the installer for **Windows x86** as this is the installer that contains the requisite 32-bit JDK.

Tip: WebLogic Server 12.2.1. WebLogic Server 12.2.1 is not officially supported with a 32-bit JDK by the WebLogic Server development team; however, JD Edwards has thoroughly tested it in 32-bit mode and does support this configuration with the following caveat:

- Due to an issue in WebLogic Server 12.2.1.4, the 32-bit JDK used to install WebLogic Server must not include any closing parentheses (') in the JDK installation directory such as in the default JDK installation directory C:\Program Files (x86)\Java; hence, you must change the installation directory when installing the JDK.

When downloading the JDK installer for WebLogic Server 12.2.1, choose the installer for **Windows x86** if your JD Edwards EnterpriseOne Development Client software is 32-bits. Choose the installer for **Windows x64** if your Development Client software is 64-bits.

Tip: WebLogic Server 14.1.1. If your Development Client operating system is 64-bit, choose the **Windows x64** installer.

Follow these steps to determine the version and bitness of the JDKs installed on your Development Client machine:

1. Go to Control Panel > Programs and Features.
2. Scan the list of installed programs for this listing:

Java SE Development Kit x Update x

where 'x' can be any number.

The terminology for the version of Java JDKs is not consistent between versions of Java. The important things that must be present in the installed program description are defined by these rules:

- If **64-bit** is not stated, the JDK is a 32-bit version.
- An installed JDK is designated with this text:

Java SE Development Kit

- The first number of the JDK version (for example, the number **1** in 1.8.0.x) is dropped in the Programs and Features list.
- In the JDK version 1.8.0.x, the **x** is specified as the Update number in the Programs and Features list.

As an example of the above rules, a 32-bit 1.8.0.60 JDK will be designated as:

Java SE Development Kit 8.0 Update 60

3. If the correct JDK is not installed, you must download and install one.

Obtaining WebLogic Server

Use this procedure to download the WebLogic Server installer from the Oracle Software Delivery Cloud.

1. Go to this web site:
<https://edelivery.oracle.com>
2. On Oracle Software Delivery Cloud, select Download Package in the drop-down list.
3. In the Search field, enter this string:
Oracle WebLogic Server, Standard Edition

4. Click Search.
5. On Oracle Software Delivery Cloud, in the Found Results list, click the Select button next to the version of the Oracle WebLogic Server that is listed in the Oracle Certifications for use with the JD Edwards EnterpriseOne Development Client.
6. Click View Items and then Continue.
7. Expand the entry Oracle WebLogic Server Standard Edition by clicking the arrow to the left of the release name.
8. Turn off all rows except Oracle WebLogic Server.
9. In the Platforms/Languages column, click the drop-down arrow and select this checkbox:
Microsoft Windows x64 (64-bit)
10. Click outside the drop-down list and click the **Continue** button.
11. On Oracle Standard Terms and Restrictions, read the license agreement, click the checkbox if you accept, and click the **Continue** button.
12. Ensure that a checkmark exists next to the file(s) to download.
13. Click the **Download** button.
14. Extract the contents of the downloaded file.

For WebLogic Server 12.1.3

The download should consist of this file or a similar version number:

```
fmw_12.1.3.0.0_wls.jar
```

For WebLogic Server 12.2.1

The download should consist of this file or a similar version number:

```
fmw_12.2.1.0.0_wls.jar
```

For WebLogic Server 14.1.1

The download should consist of this file or a similar version number:

```
fmw_14.1.1.0.0_wls_generic.jar
```

Installing WebLogic Server

CAUTION: Prior to installing WebLogic Server, ensure an appropriate JDK is installed. For details, refer to the preceding section entitled: *Installing a JDK for WebLogic Server*. This procedure assumes you followed the instructions in the previous section of this chapter for obtaining the WebLogic installer and that you extracted the download.

Note: The following installation screen shots are captured during installation of WebLogic Server 12.1.3. In case of WebLogic Server 12.2.1 installation, the screens will be similar with different WebLogic Server version.

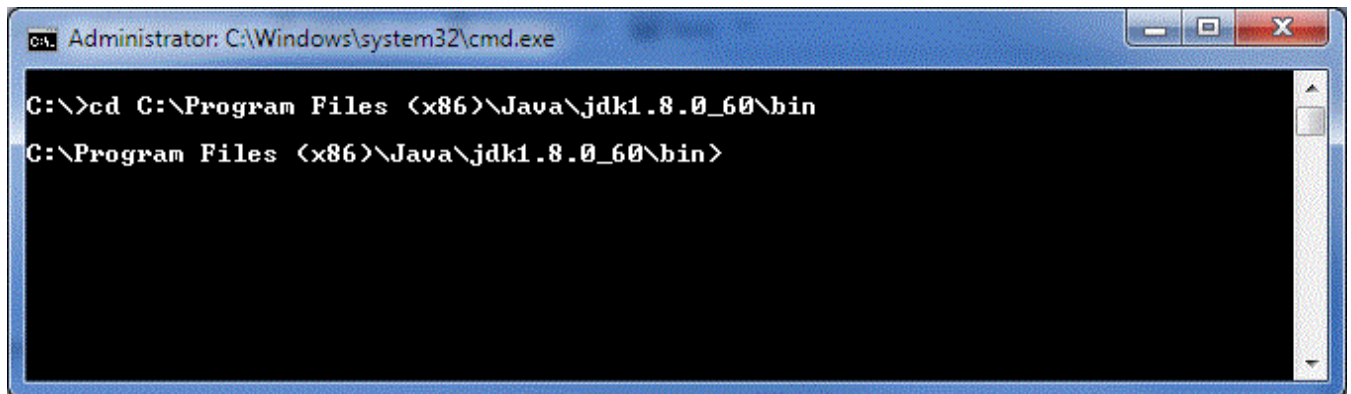
To install WebLogic Server on the Development Client:

1. Open a command prompt window with **Run as Administrator**.
2. Run this command in the command prompt window to change directory:

```
cd <Java_installation_dir>\bin
```

where <Java_installation_dir> is the directory where you installed the JDK.

For example:



```
Administrator: C:\Windows\system32\cmd.exe
C:\>cd C:\Program Files (x86)\Java\jdk1.8.0_60\bin
C:\Program Files (x86)\Java\jdk1.8.0_60\bin>
```

For more details on supported versions of the JDK, refer to the section of this chapter entitled: *Installing a JDK for WebLogic Server*.

3. Run this command in the command prompt window to launch the WebLogic Server installer:

For WebLogic Server 12.1.3:

```
java -jar <path_to_wls_file>\fmw_12.1.3.0.0_wls.jar
```

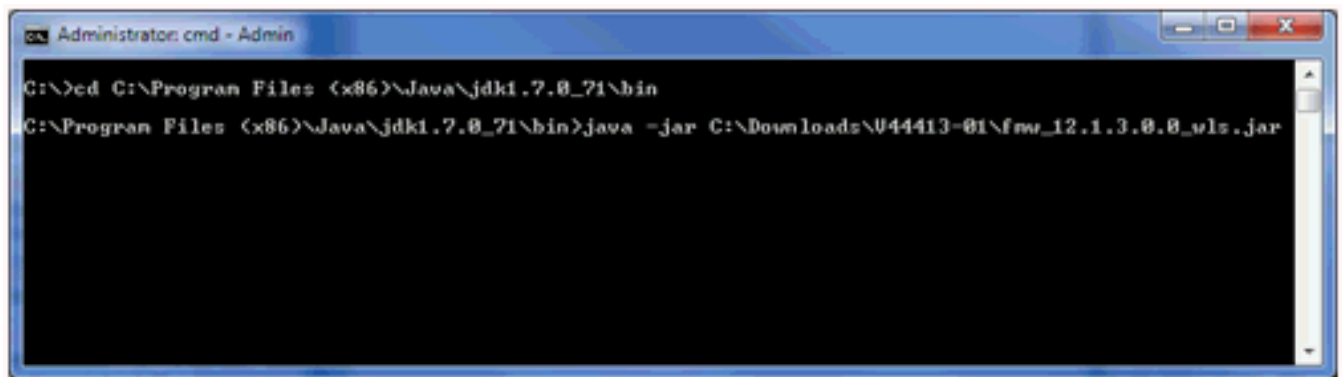
For WebLogic Server 12.2.1:

```
java -jar <path_to_wls_file>\fmw_12.2.1.0.0_wls.jar
```

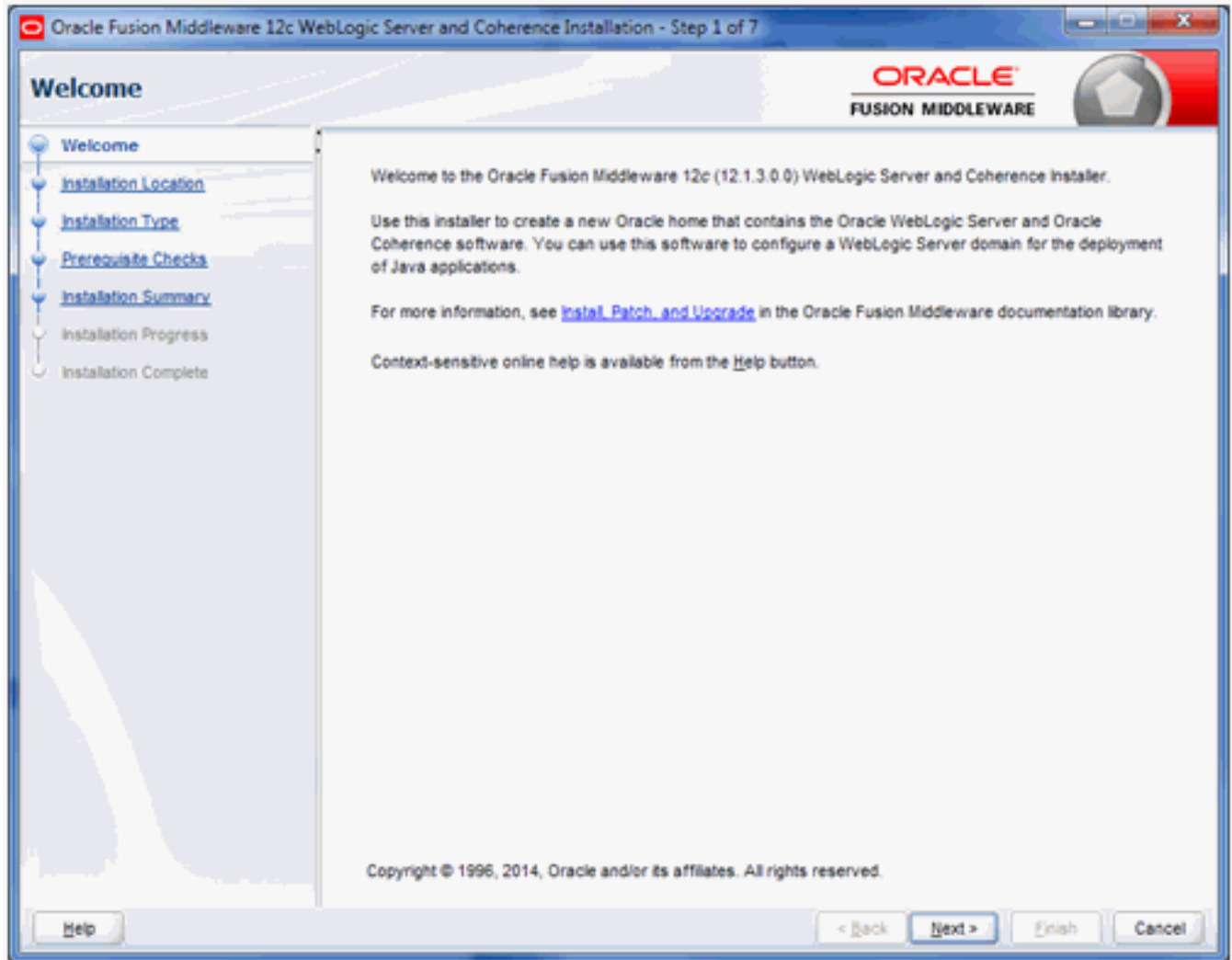
For WebLogic Server 14.1.1:

```
java -jar <path_to_wls_file>\fmw_14.1.1.0.0_wls.jar
```

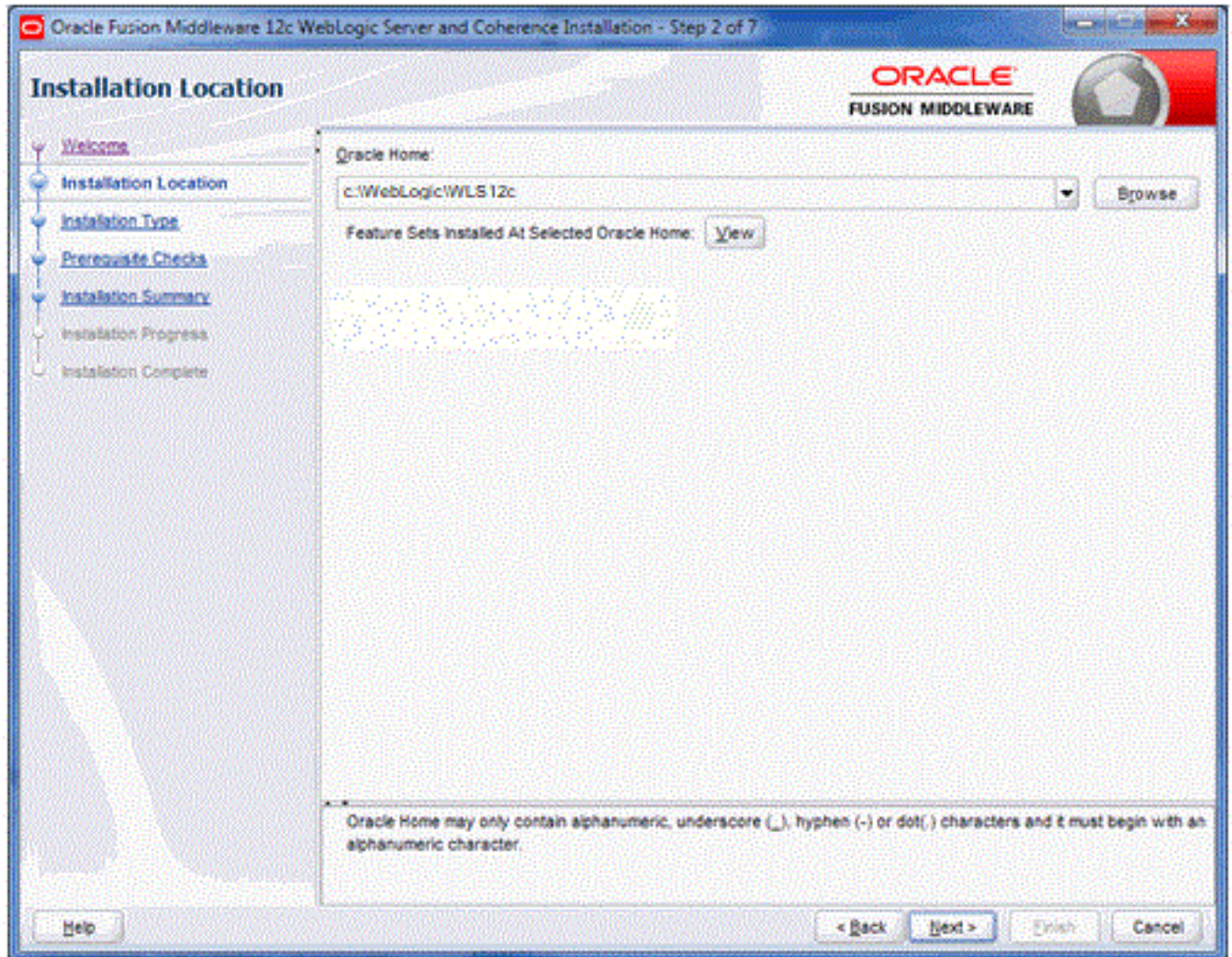
For example:



The Java command executes and displays the Welcome screen for the Oracle Fusion Middleware.



4. On Welcome, click the **Next** button.



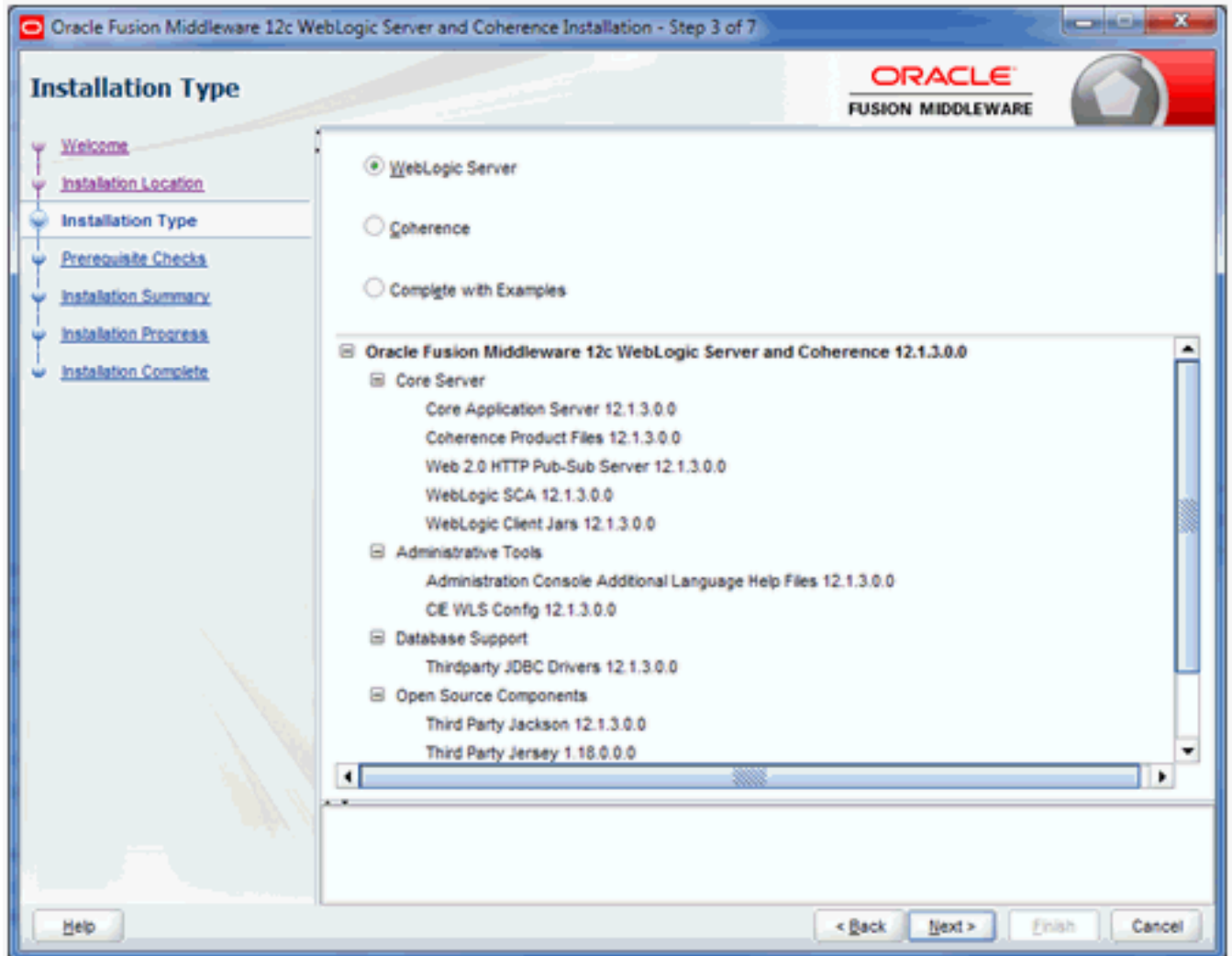
5. On Installation Location, in the *Oracle Home* field, enter or browse to a path into which you want to install WebLogic Server.

Important:

Oracle recommends that you install WebLogic into its own root directory and not into any other Oracle base directory used by another Oracle product, such as `c:\ORACLE`. For example, you should specify a directory such as `c:\WebLogic\WLS12c`.

Note: You can choose any install location; however, using a location that contains "space" characters in the path may cause problems.

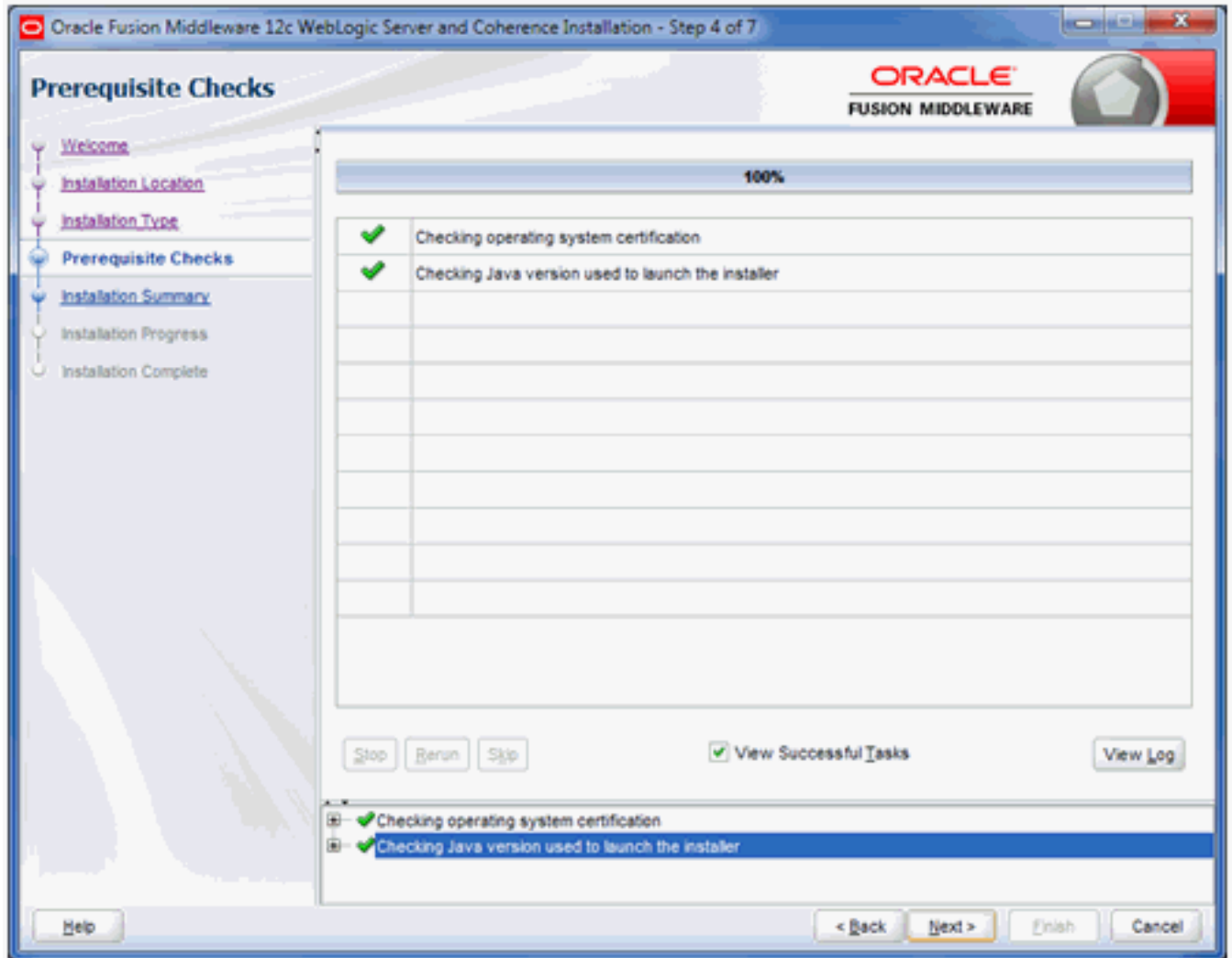
6. Click the **Next** button.



7. On Installation Type, select this radio button:

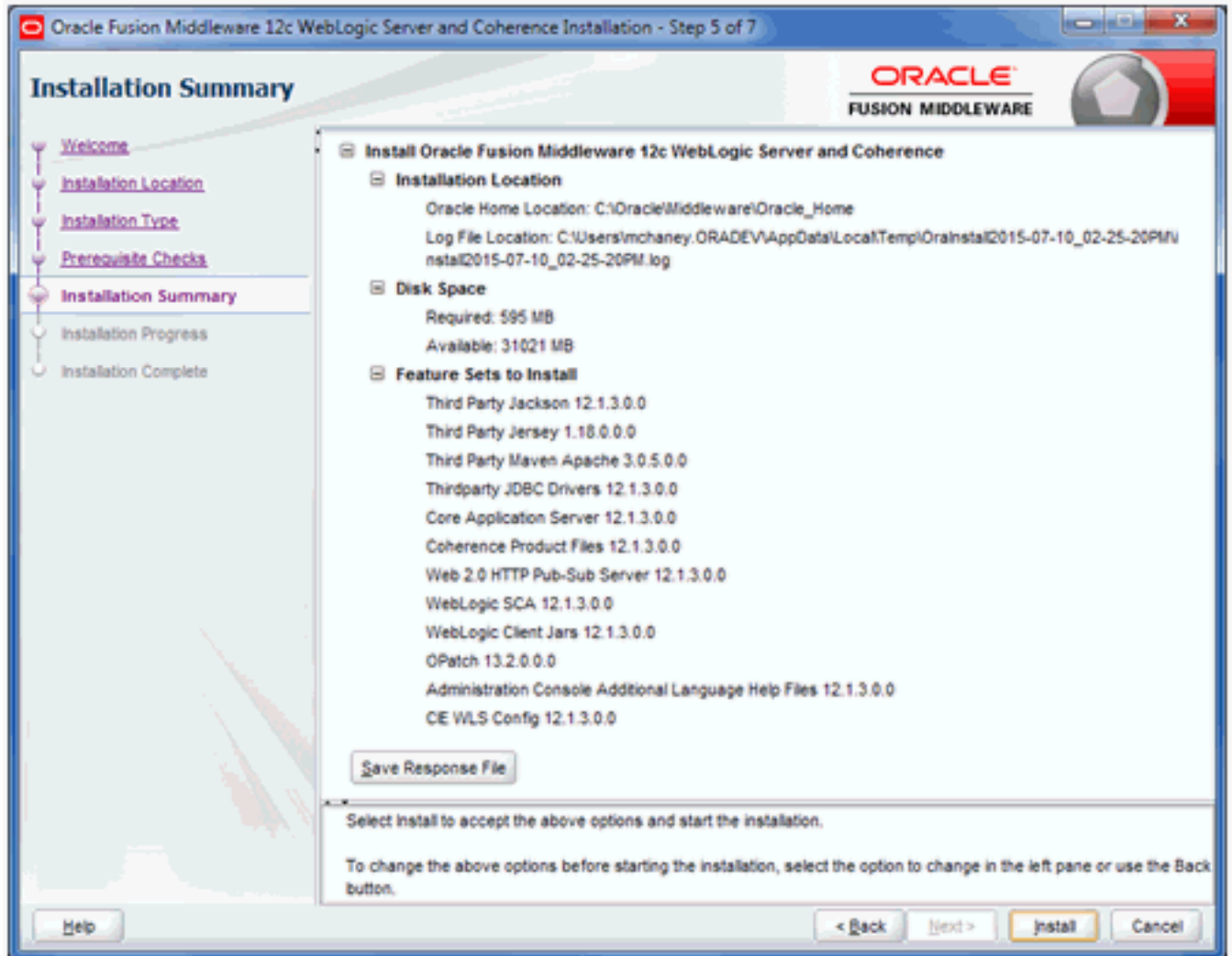
WebLogic Server

8. Click the **Next** button.



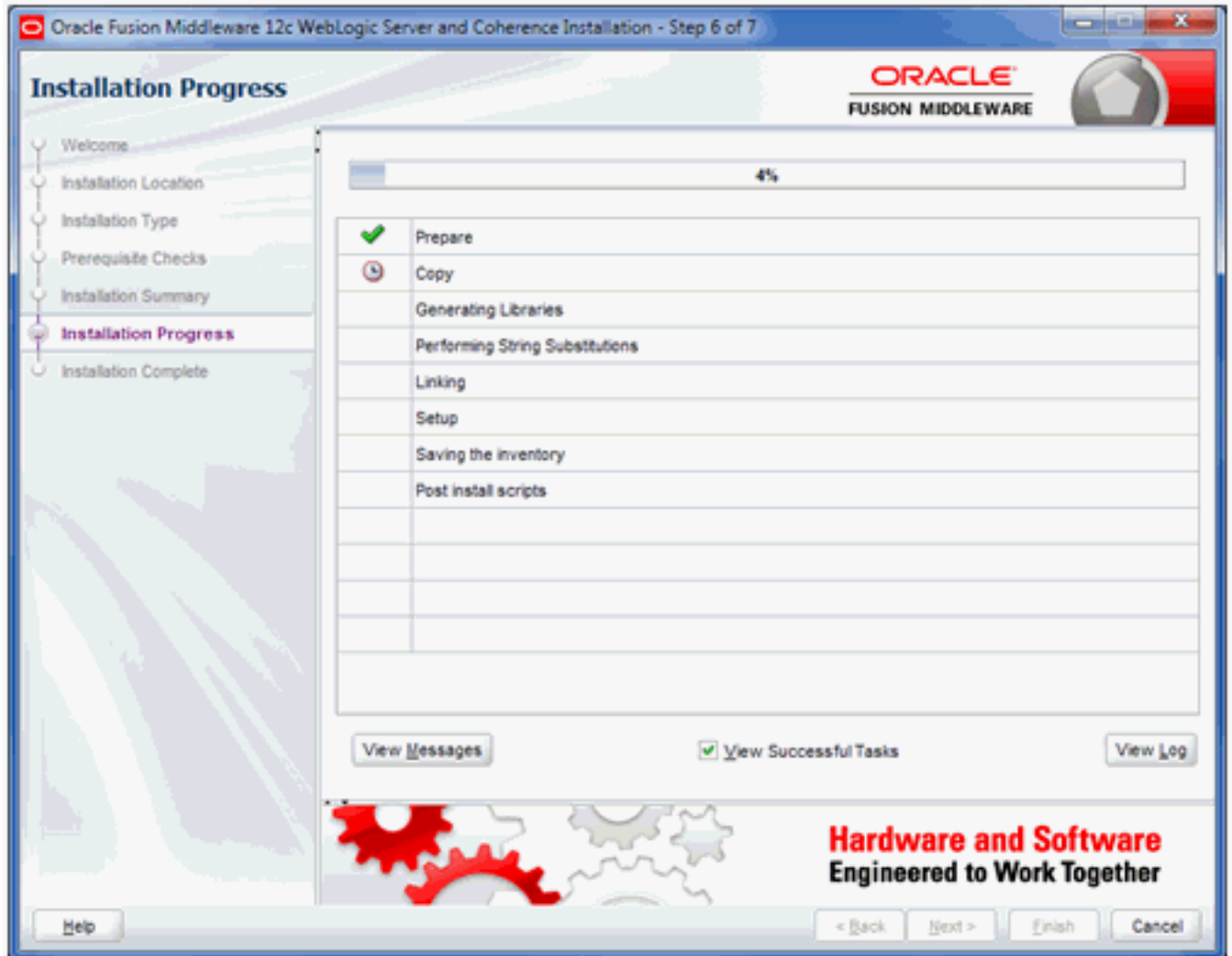
9. On Prerequisite Checks, verify the installer checks complete successfully.

10. Click the **Next** button.

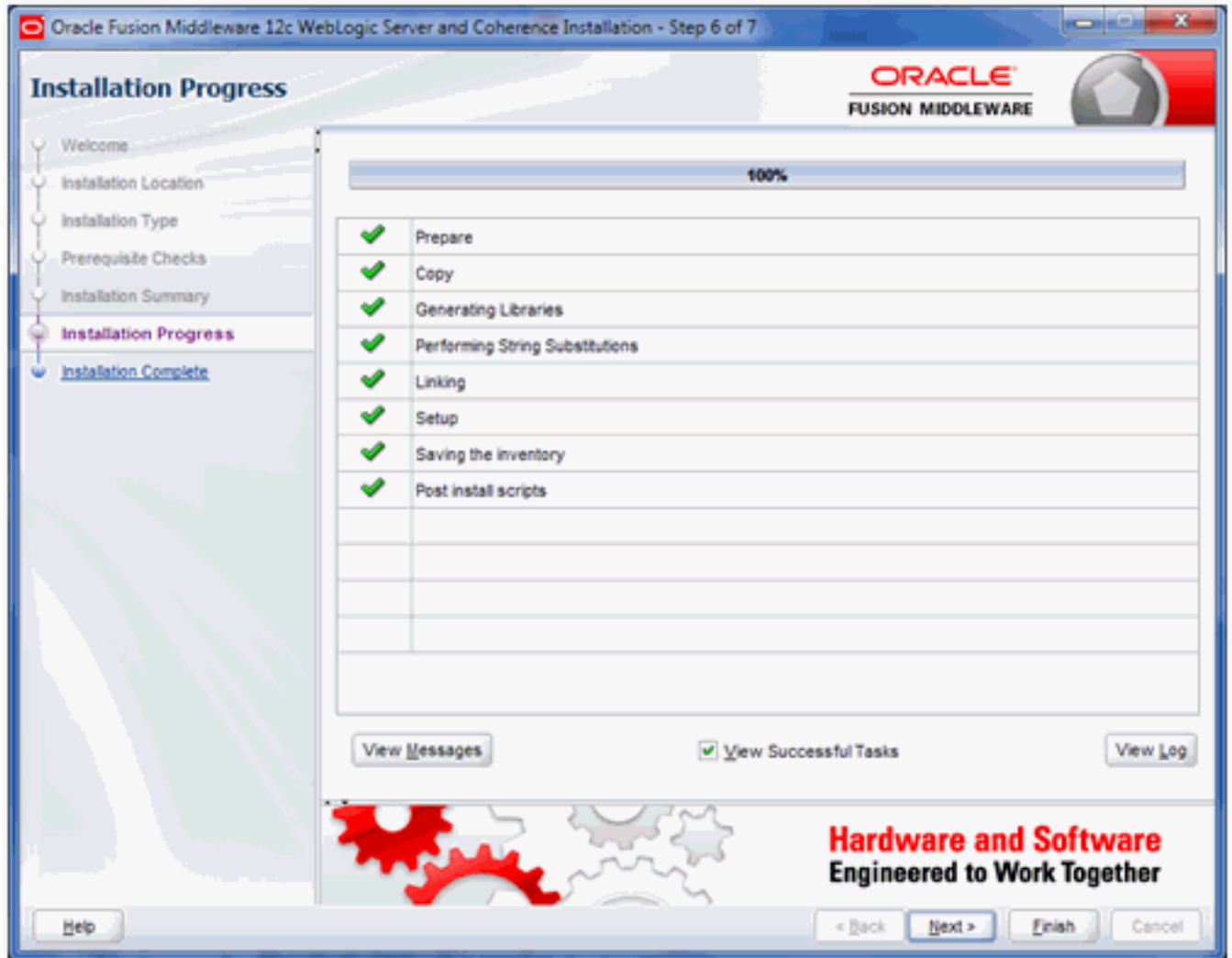


11. On Installation Summary, review the summary information.

12. Click the **Next** button.

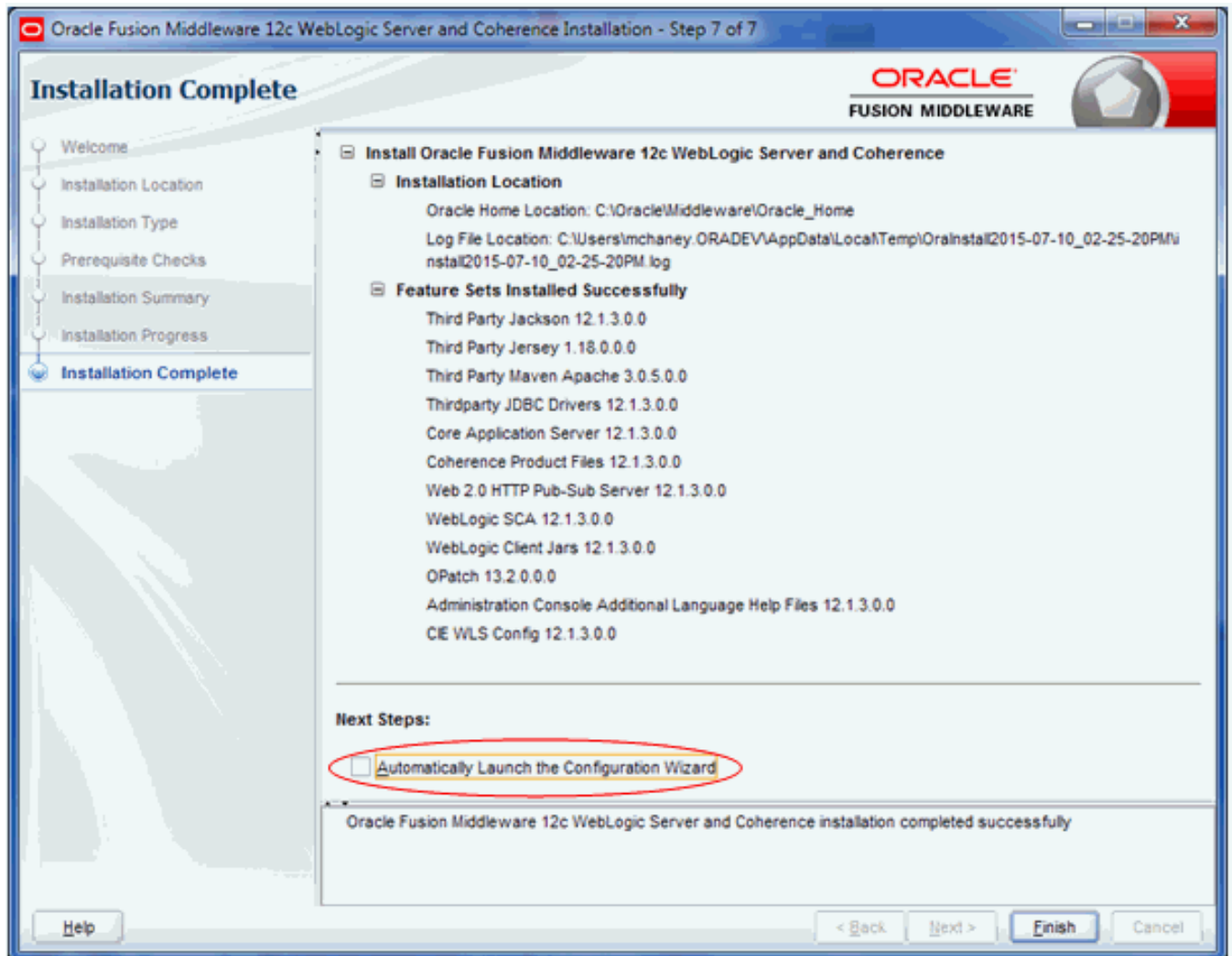


The installer displays the Installation Progress as a percentage in the progress bar.



13. On Installation Progress, the installation is complete when the progress bar indicates 100%.

14. Click the **Next** button.



15. On Installation Complete, turn **off** this checkbox:

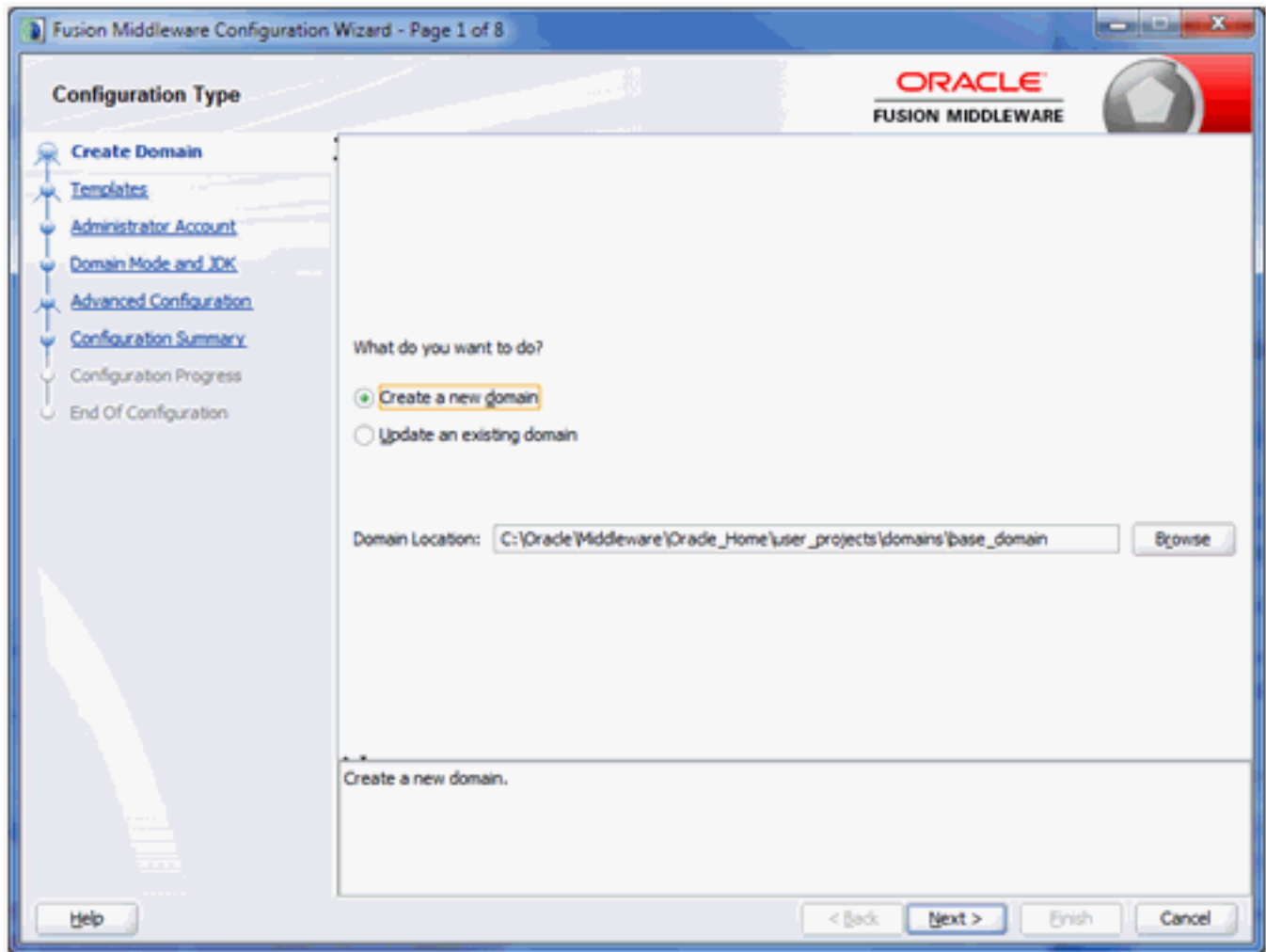
Automatically Launch the Configuration Wizard

16. Click the **Finish** button.

There is no additional manual configuration of the WebLogic Server. The remainder of the requisite configuration is handled programmatically by the WLSH4A installer.

Note: Troubleshooting. If after you click the **Finish** button you receive the following screen, you did not turn off the checkbox in the previous screen. To proceed you can simply click **Cancel** button to exit.

Note: WebLogic 12.2.1. . You must apply a mandatory Opatch after WebLogic Server 12.2.1.0 has been successful installed. This is described in the Oracle support document entitled: **E1: WLS: For JD Edwards EnterpriseOne HTML Server to run Oracle WebLogic Server 12.2.1.0 a Mandatory Patch is Required (Doc ID 2192375.1)**



5 Installing WebSphere Express 8.5.5, WebSphere for Developers 8.5.5, or WebSphere 9.0

Installing WebSphere Express 8.5.5, WebSphere for Developers 8.5.5, or WebSphere 9.0

The Web Client part of the EnterpriseOne Development Client requires that an application server is installed. An application server processes requests from a browser and returns results to the browser to be displayed to the user.

The Development Client supports these application servers from Oracle and IBM:

- Oracle WebLogic Server (abbreviated WLS)
- IBM WebSphere Express Server (abbreviated WAS)
- IBM WebSphere Server for Developers (also abbreviated WAS)
- IBM WebSphere Application Server (also abbreviated WAS)

This chapter describes how to install WebSphere Express 8.5.5, WebSphere for Developers 8.5.5, or WebSphere 9.0. These procedures must be followed only if you are using one of the above WebSphere products for the WASH4A web client.

Note: You can skip this chapter if you are using the Oracle WebLogic Server for the WLSH4A web client. The installation of this product is described in the preceding chapter of this document. This document covers installations for version 8.5.5 of WebSphere Express and WebSphere for Developers, and version 9.0 of WebSphere Base. Follow the Oracle Certifications to determine which version is supported for your particular environment.

Obtaining and Installing the IBM Installation Manager

WebSphere Express 8.5.5, WebSphere for Developers 8.5.5, and WebSphere 9.0 must be installed using the IBM Installation Manager

1. From the IBM web site, locate and save the download the IBM Installation Manager.
2. Extract the contents of the downloaded file.
3. In the extracted directory, run `install.exe` and follow the prompts to install the IBM Installation Manager.

Obtaining and Installing WebSphere Express 8.5.5, WebSphere for Developers 8.5.5, or WebSphere 9.0

CAUTION: The installers for WebSphere Express, WebSphere for Developers, and WebSphere Base place data into the registry specifically for the Windows user that is signed into Windows at the time of installation. You *must* sign into Windows using this same user when you install and then run the JD Edwards EnterpriseOne Development and Web Clients.

Note: As described in the preceding section (*Obtaining and Installing the IBM Installation Manager*) you must use the IBM Installation Manager to install WebSphere Express 8.5.5, WebSphere for Developers 8.5.5, or WebSphere 9.0.

This section discusses these topics:

- *Obtaining WebSphere Express 8.5.5, WebSphere for Developers 8.5.5, or WebSphere 9.0*
- *Installing WebSphere Express 8.5.5 or WebSphere 9.0*

Obtaining WebSphere Express 8.5.5, WebSphere for Developers 8.5.5, or WebSphere 9.0

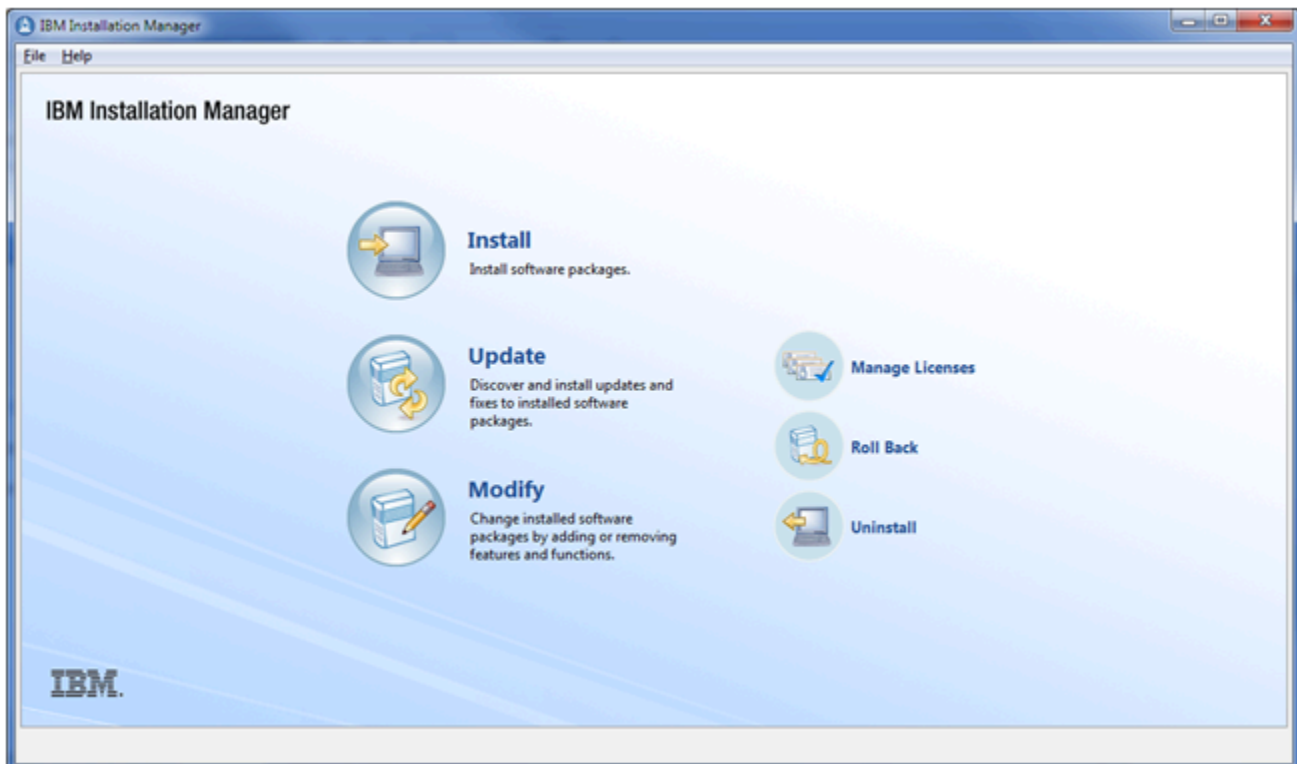
You can download the installers for WebSphere Express 8.5.5, WebSphere for Developers 8.5.5, or WebSphere 9.0 from the IBM web site.

1. From the IBM web site, download the installer for either the Express, Developers, or Base products for WebSphere.
2. Save the downloads.
3. Extract the contents of the downloaded files. If there are multiple files, be sure to select the same target directory when you extract the contents of each file.

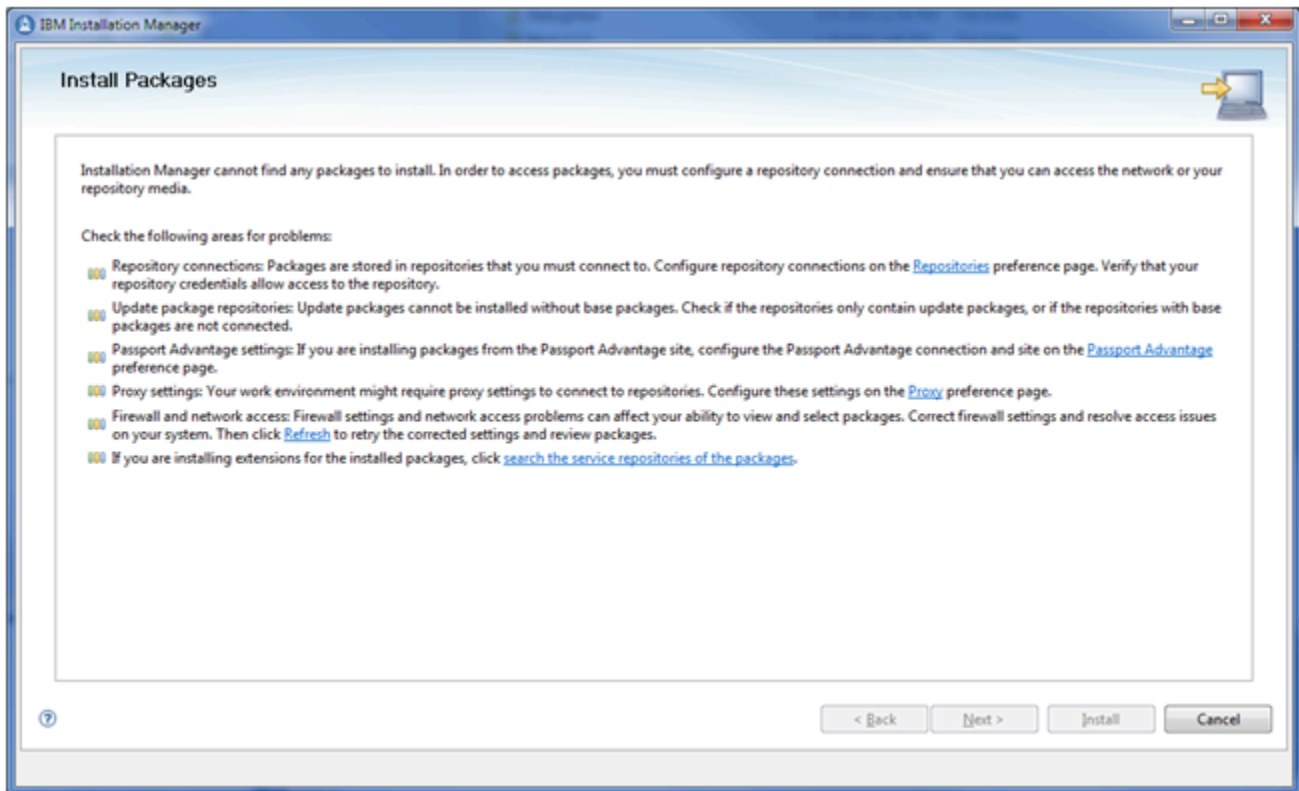
Installing WebSphere Express 8.5.5 or WebSphere 9.0

Use this procedure to install WebSphere Express 8.5.5 or WebSphere 9.0.

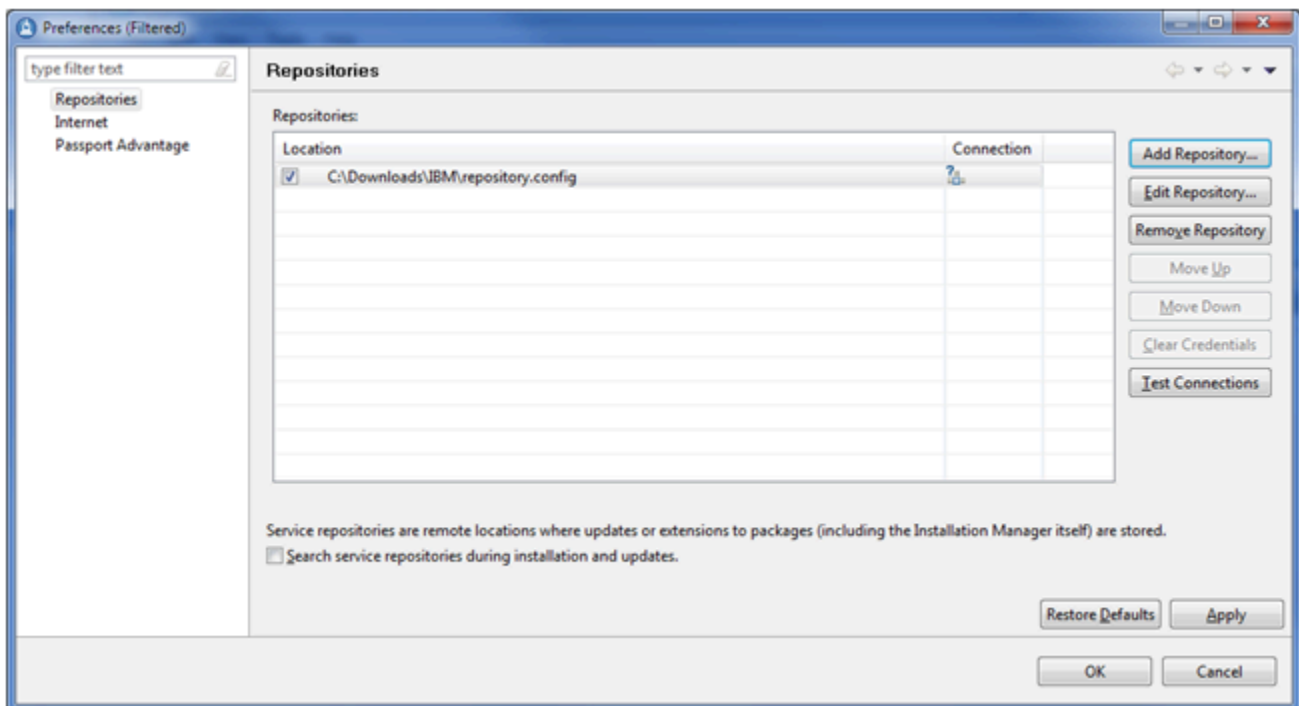
1. Run the IBM Installation Manager from the directory in which you extracted the components for WebSphere 8.5.5 or WebSphere 9.0 (as described in the preceding section entitled: *Obtaining WebSphere Express 8.5.5, WebSphere for Developers 8.5.5, or WebSphere 9.0*).



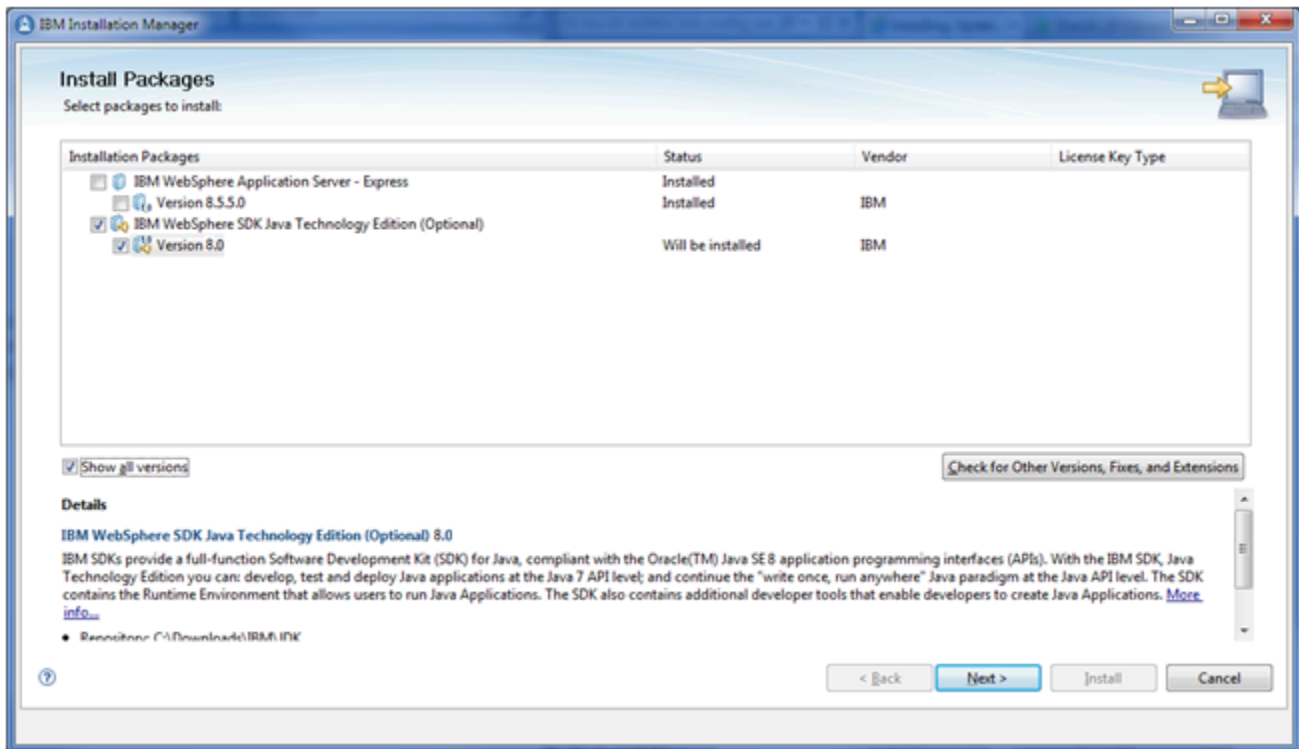
2. On IBM Installation Manager, click **Install**.



3. If you get the above screen, click the **Repositories** link to go to the Repositories preference page.



4. On the Repositories Preferences screen, click the **Add Repository** button and select the checkbox for the location of the `repository.config` in the directory where you extracted the WebSphere installation files.
5. Click the **OK** button.

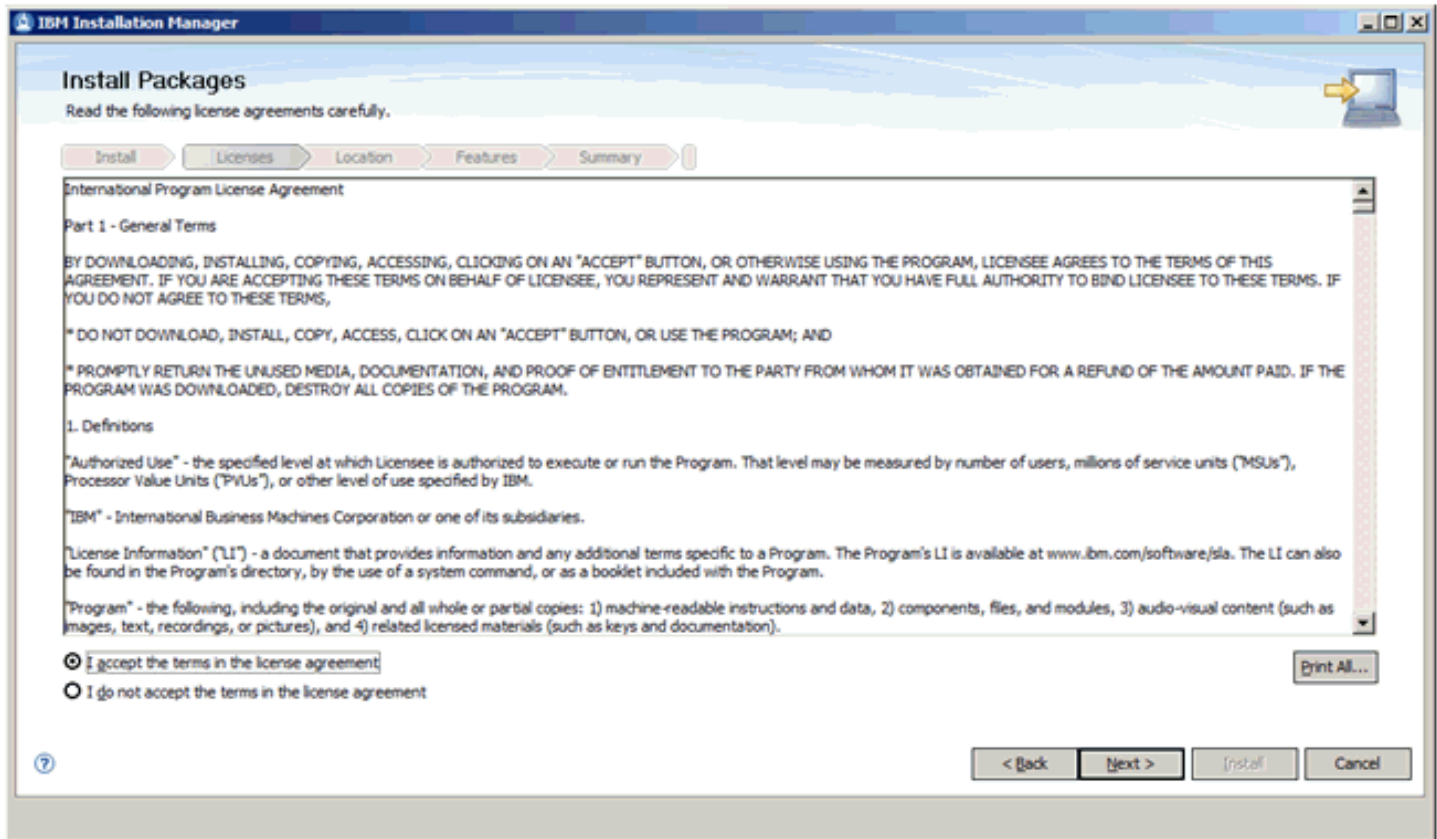


6. On Install Packages, Select Packages to install, turn on the checkbox next to IBM WebSphere Application Server - Express, IBM WebSphere Application Server for Developers, or IBM WebSphere Application Server, whichever is applicable to your implementation.

Note: The WebSphere Express and WebSphere for Developers screens are branded identically.

Note: For WebSphere 9.0, the installer screens shown on this screen will display Version 9.0 instead of Version 8.5.5.0.

7. Click the **Next** button.

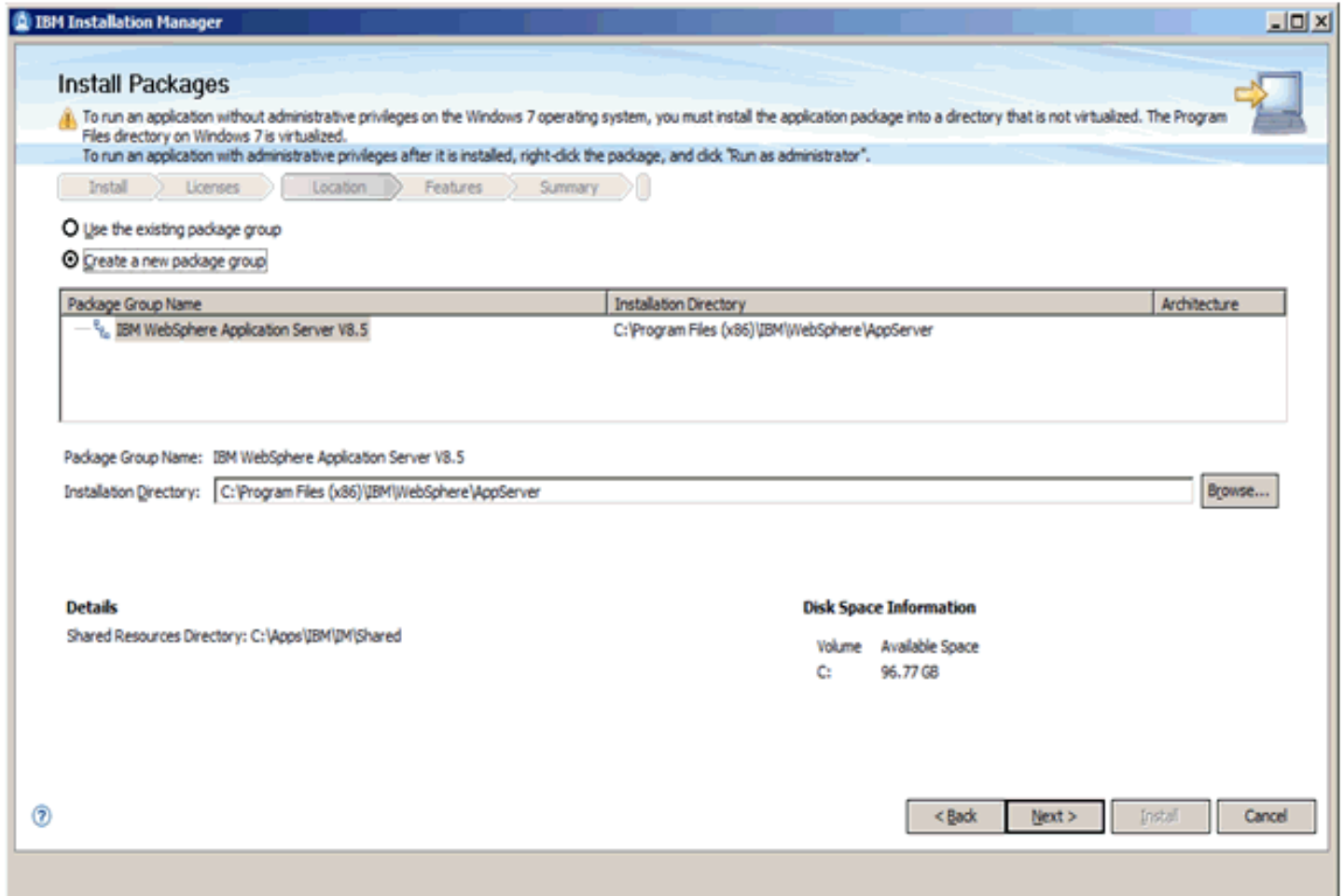


8. On Install Packages, International Program License Agreement, click the radio button to accept the license agreement.

Optionally, you can click the Print All... button to print the license agreement.

If you do not accept the license agreement, the installation process is terminated.

9. Click the **Next** button.

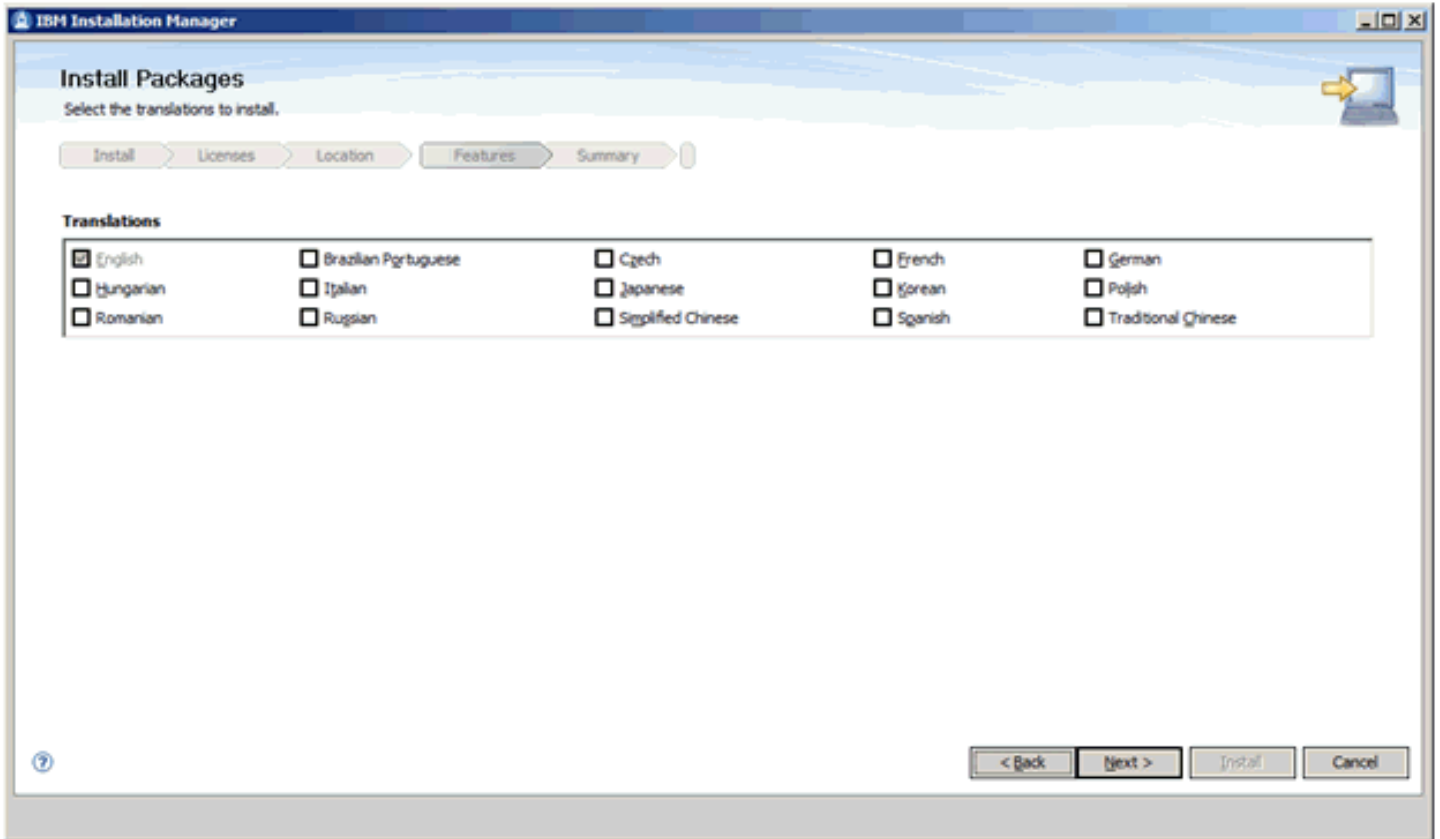


10. On Install Packages, Package Selection, turn on this radio button:

Create a new package group

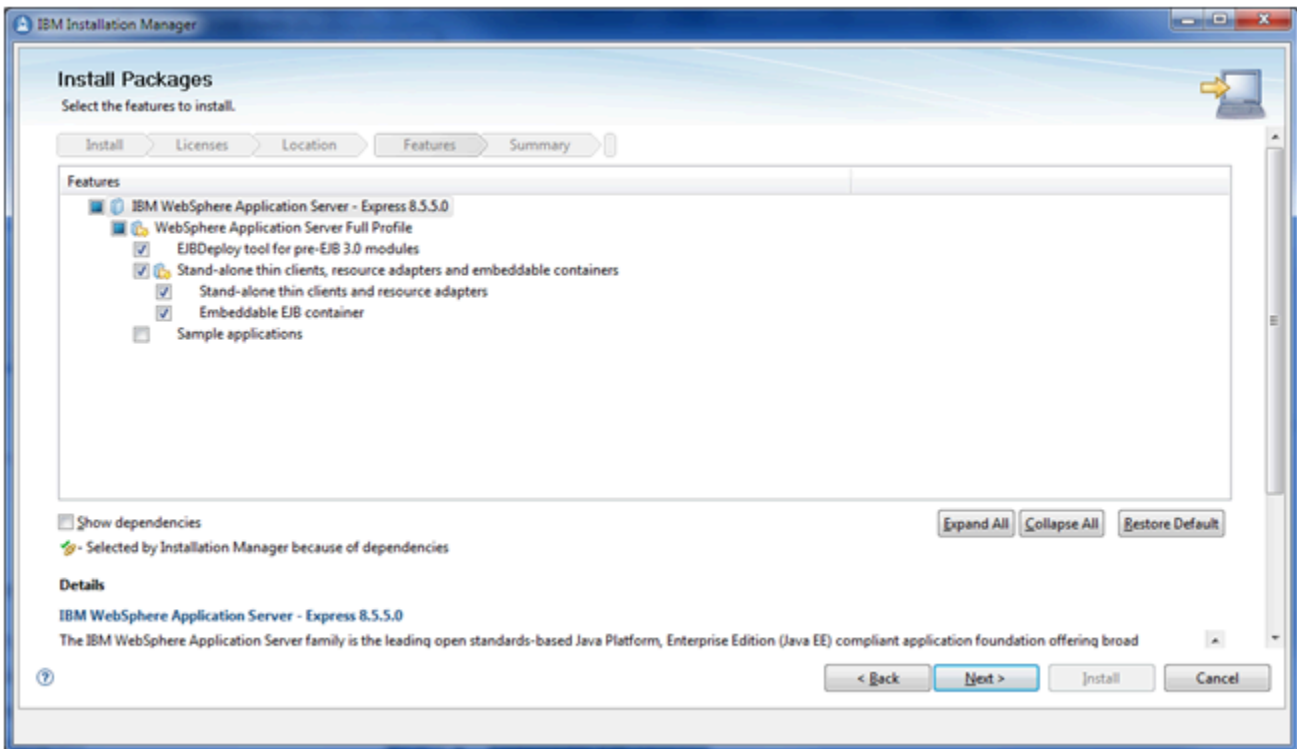
You can enter an alternate installation directory in the **Installation Directory** field.

11. Click the **Next** button.



12. On Install Packages, Select Translations, select the checkbox(es) next to the language(s) that you want to install.

13. Click the **Next** button.

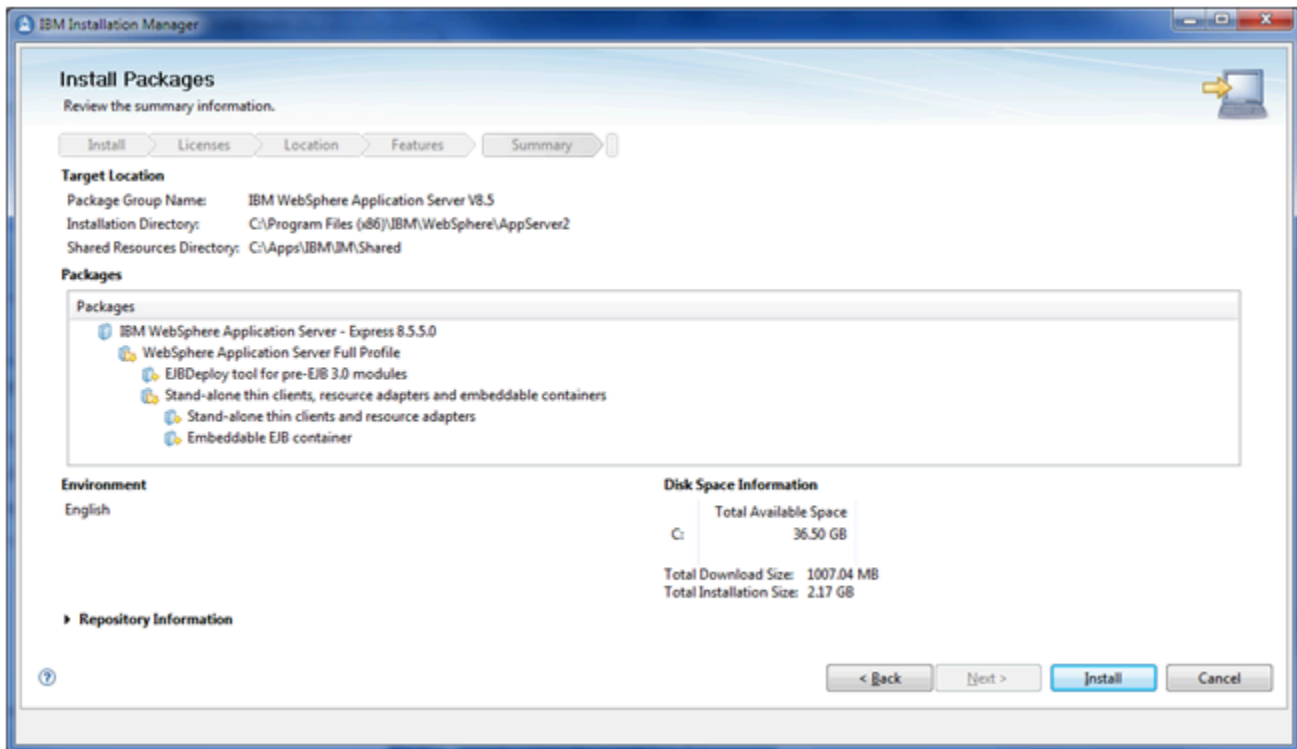


14. On Install Packages, Select Features, you can accept the default values which should include the selection of these features:

- WebSphere Application Server Full Profile
- EJBDeploy tool for pre EJB 3.0 modules
- Stand-alone thin clients, resource adapters and embeddable containers
- Stand-alone thin clients and resource adapters
- Embeddable EJB container

Note: For WebSphere 9.0, the installer screens shown on this screen will display Version 9.0 instead of Version 8.5.5.0.

15. Click the **Next** button.



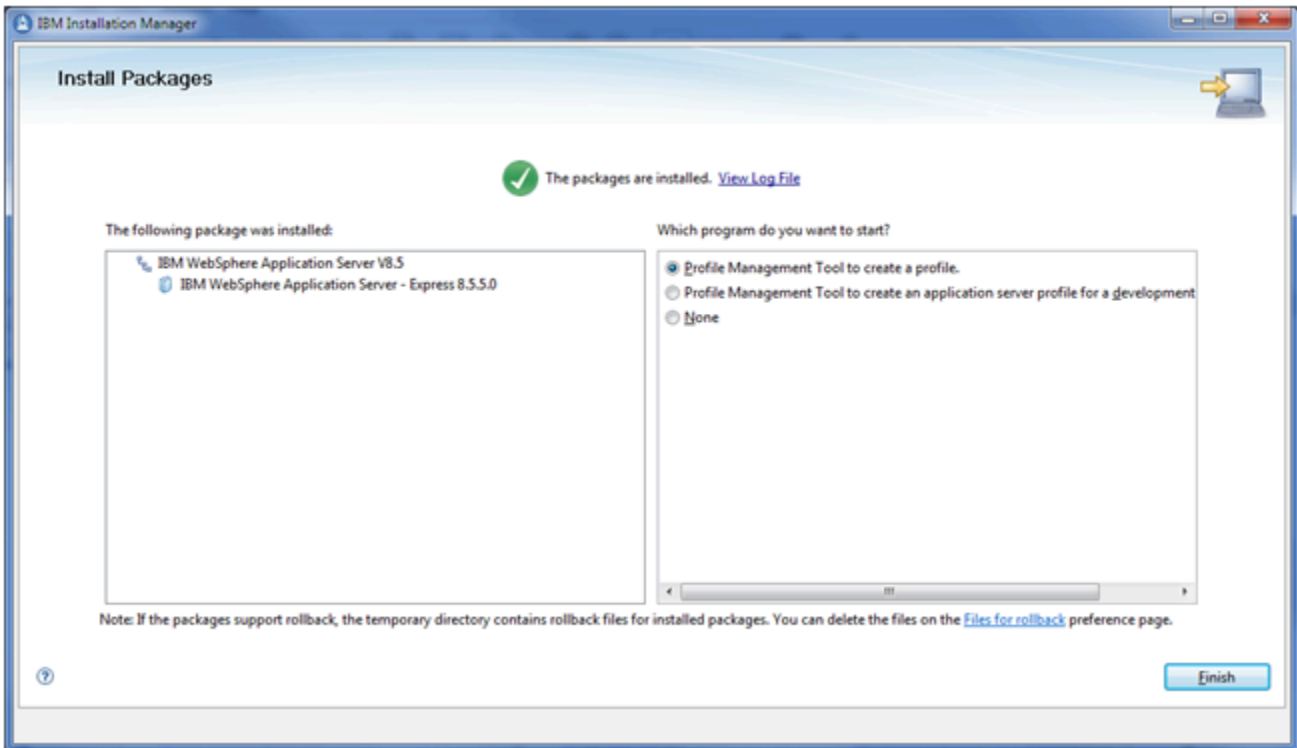
16. On Install Packages, Summary Information, review all the information on this screen, using the scroll bar if necessary.
17. Click the **Install** button.

Note: For WebSphere 9.0, the installer screens shown on this screen will display Version 9.0 instead of Version 8.5.5.0.

Creating a Profile

You must now create a WebSphere Express, WebSphere for Developers, or WebSphere 9.0 profile.

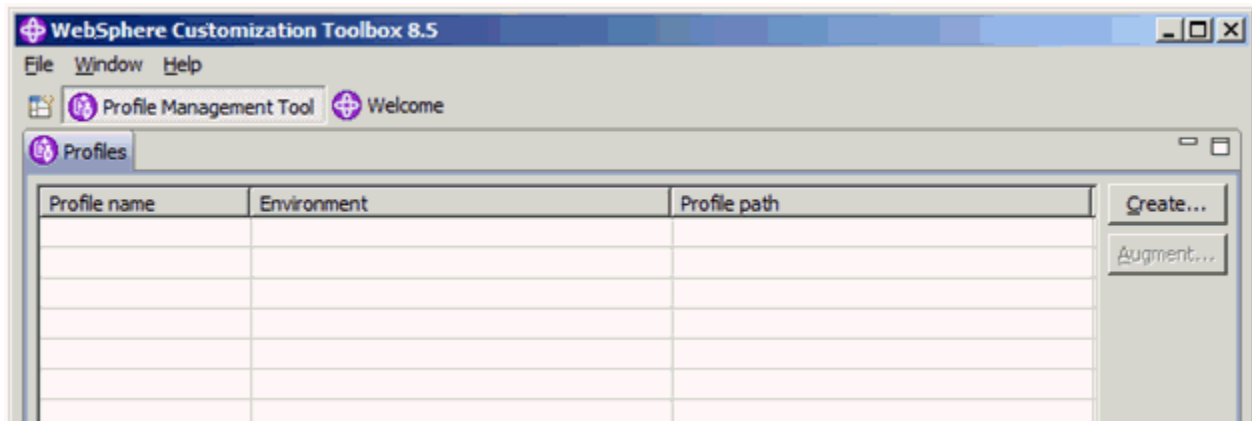
Note: For WebSphere 9.0, the installer screens shown on this screen will display Version 9.0 instead of Version 8.5.5.0.



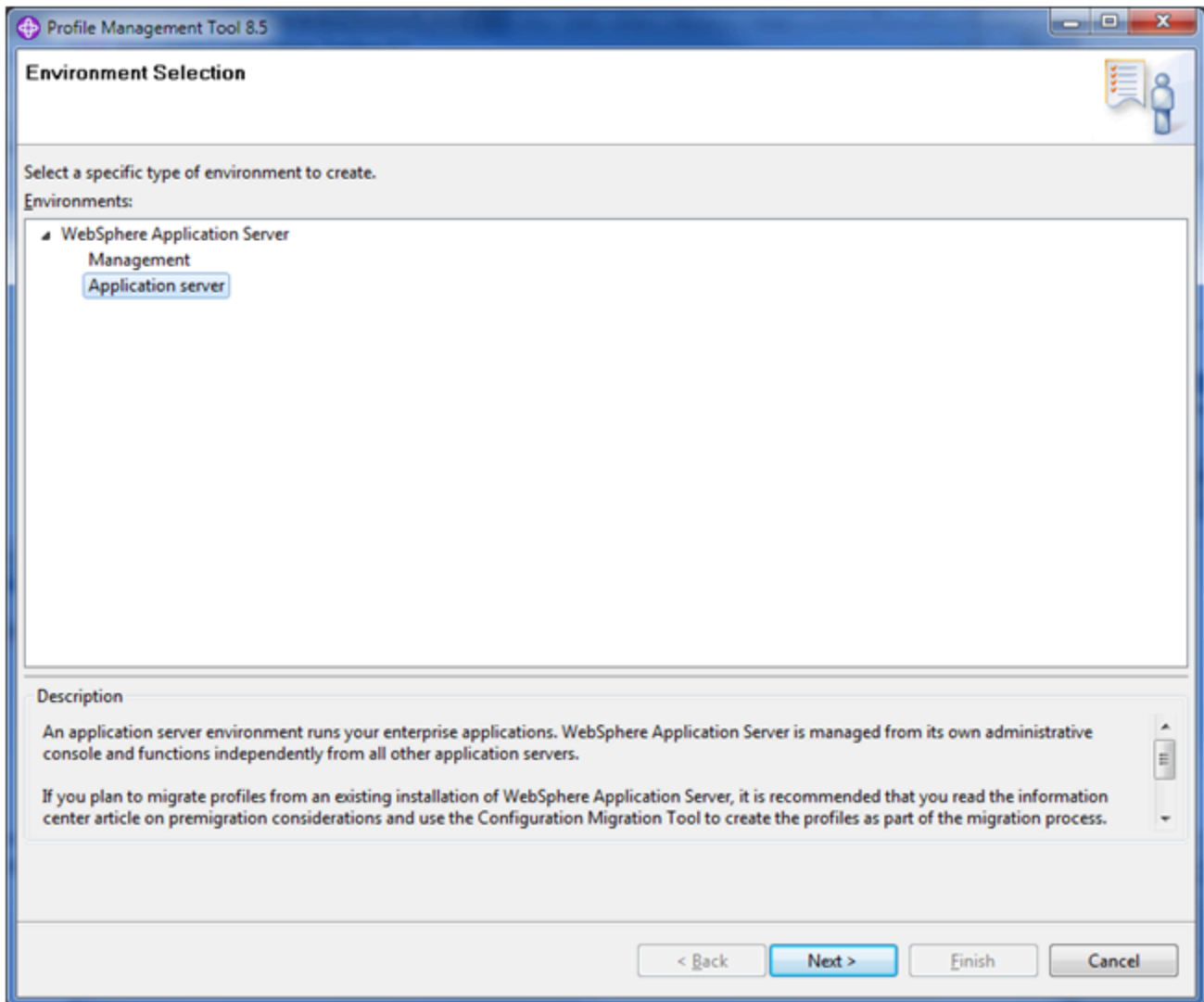
1. On Install Packages, Packages are Installed, in the right hand pane entitled: **Which program do you want to start?**, turn on this radio button:

Profile Management Tool to create a profile

2. Click the **Finish** button.

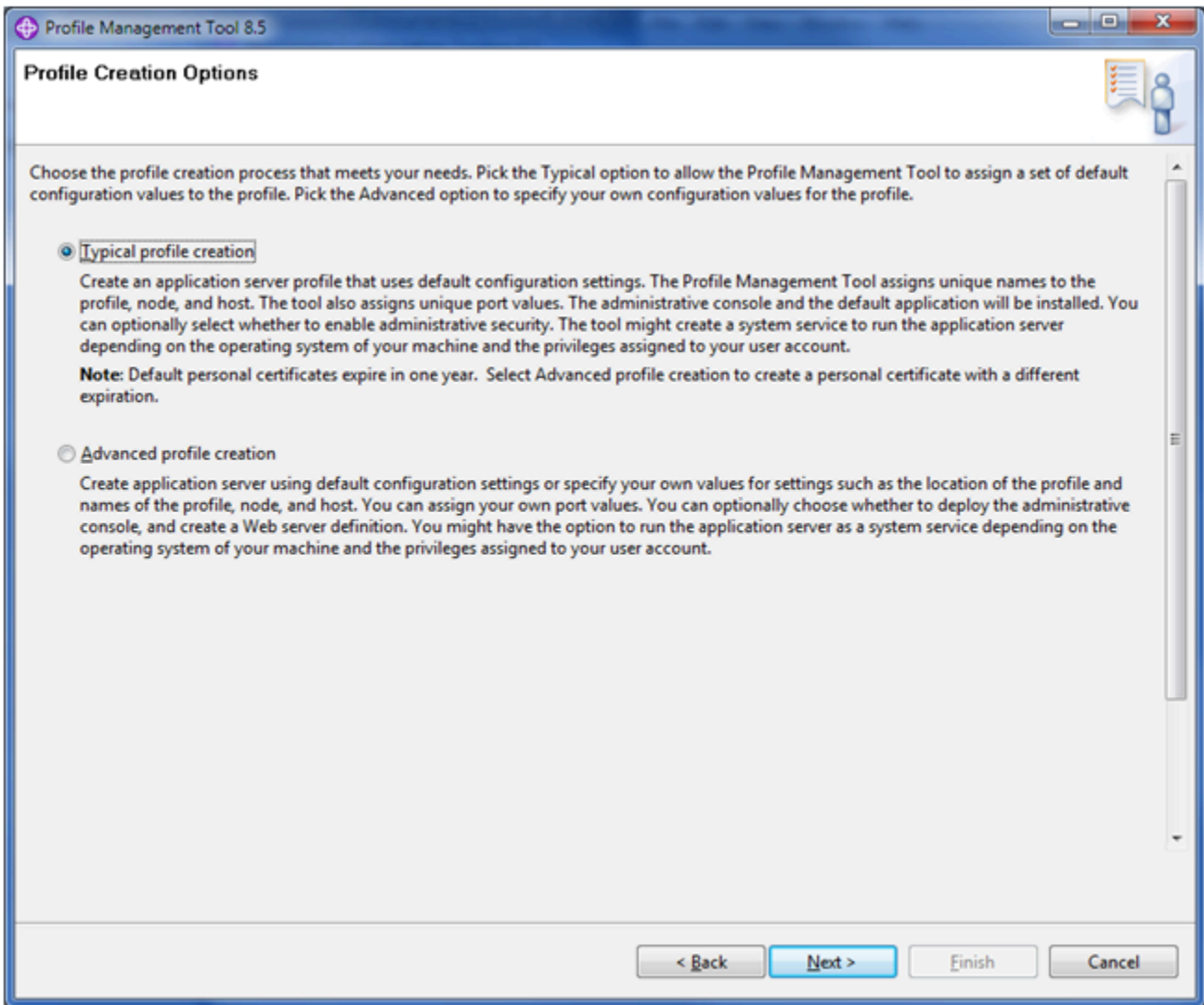


3. On WebSphere Customization Toolbox 8.5.5 or 9.0 Profile Management Toolbox, click the **Create...** button.



4. On Environment Selection, select the **Application Server** node.

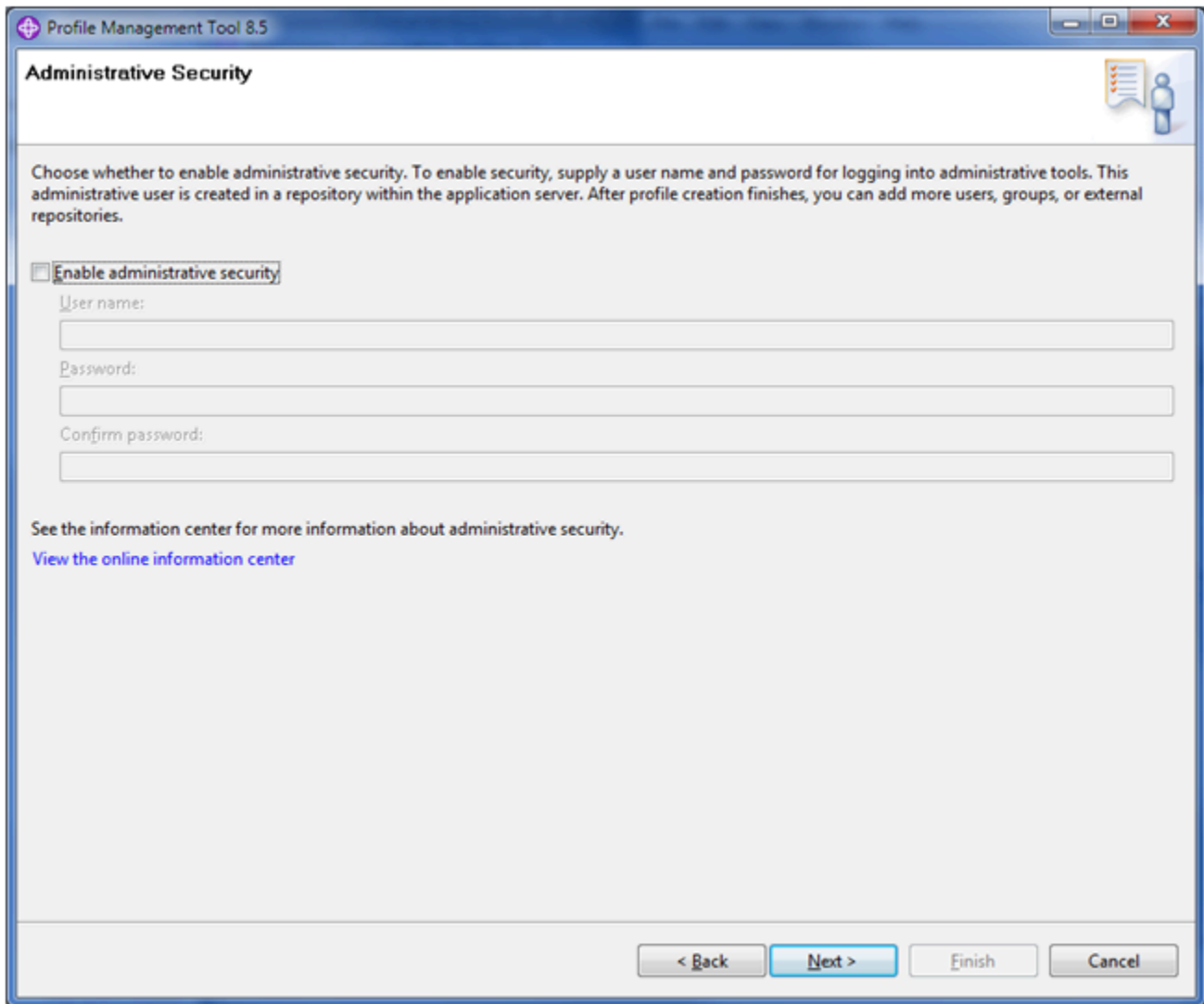
5. Click the **Next** button.



6. On Profile Creation Options, click this radio button:

Typical profile creation

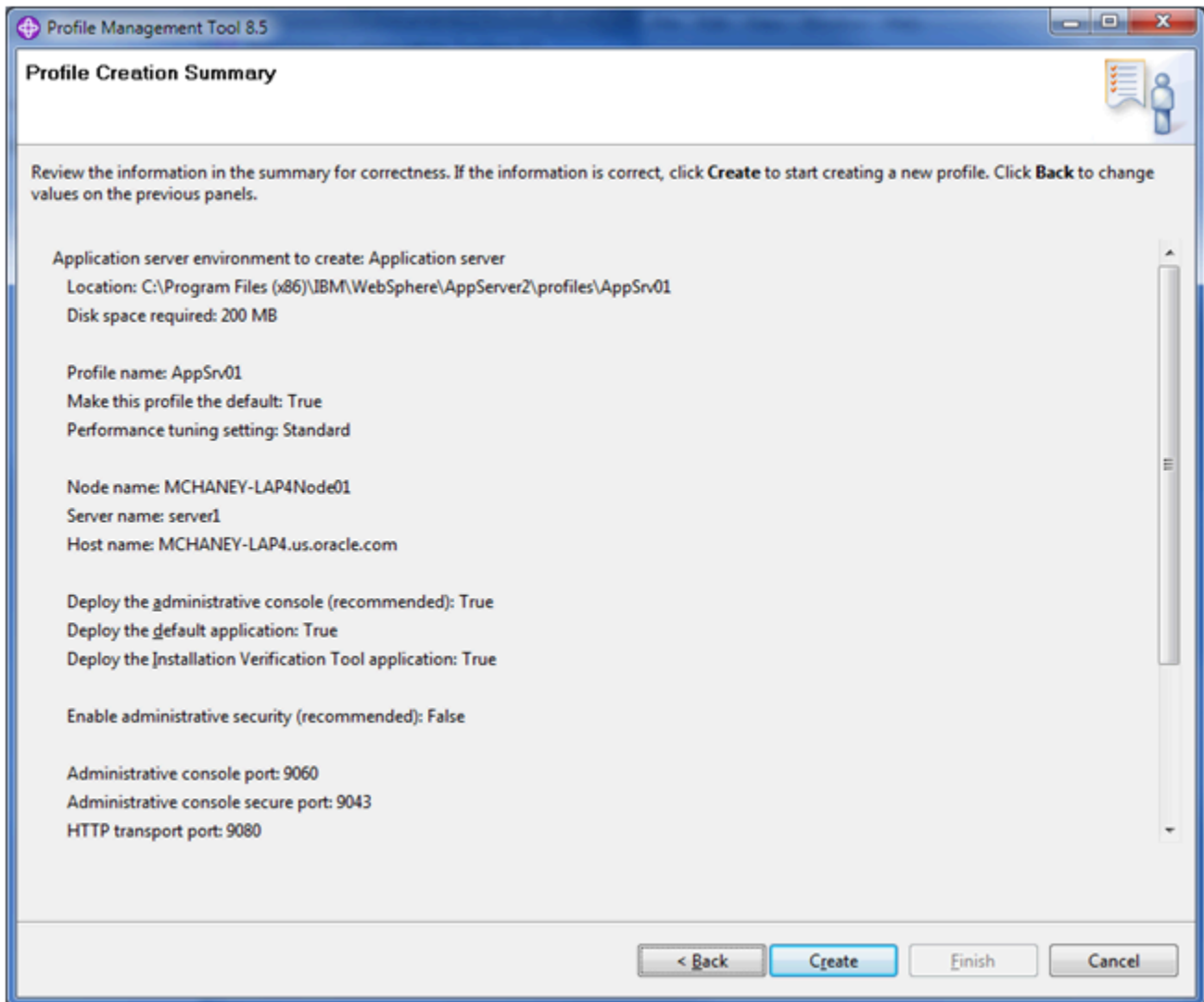
7. Click the **Next** button.



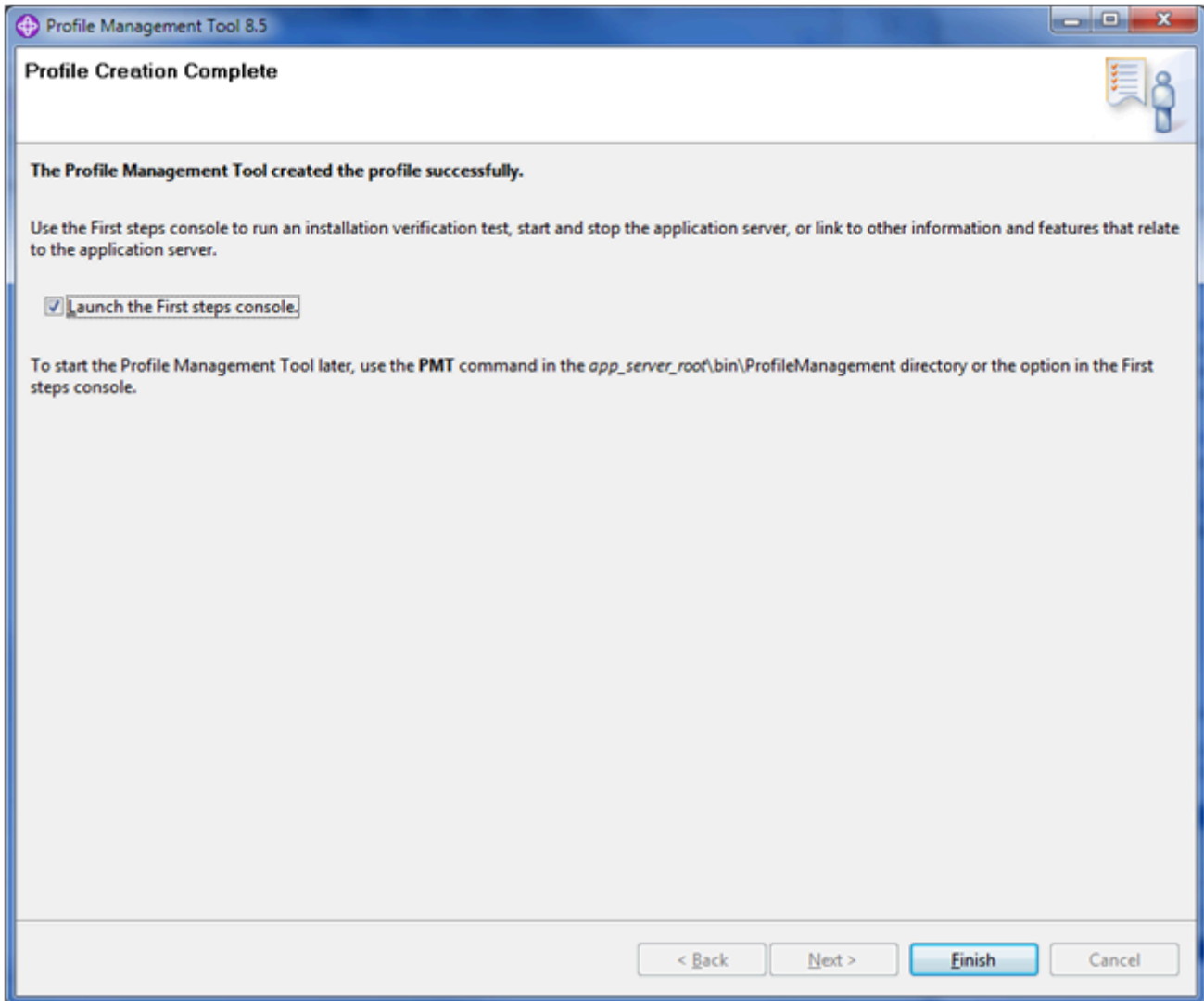
8. On Administrative Security, click the checkbox to turn off (disable) **Enable administrative security**.

CAUTION: The JD Edwards EnterpriseOne Development Client does not support secured profiles.

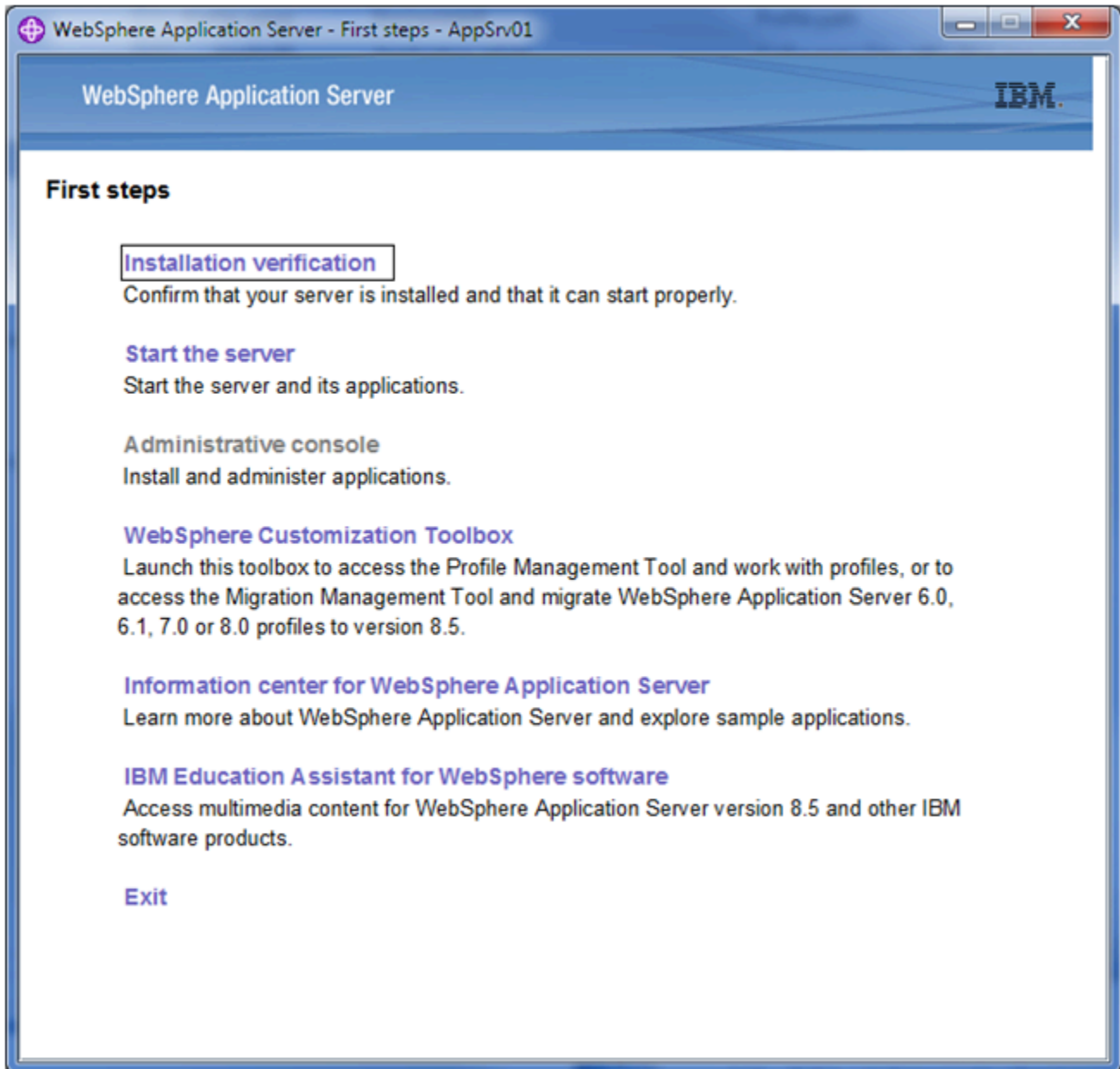
9. Click the **Next** button.



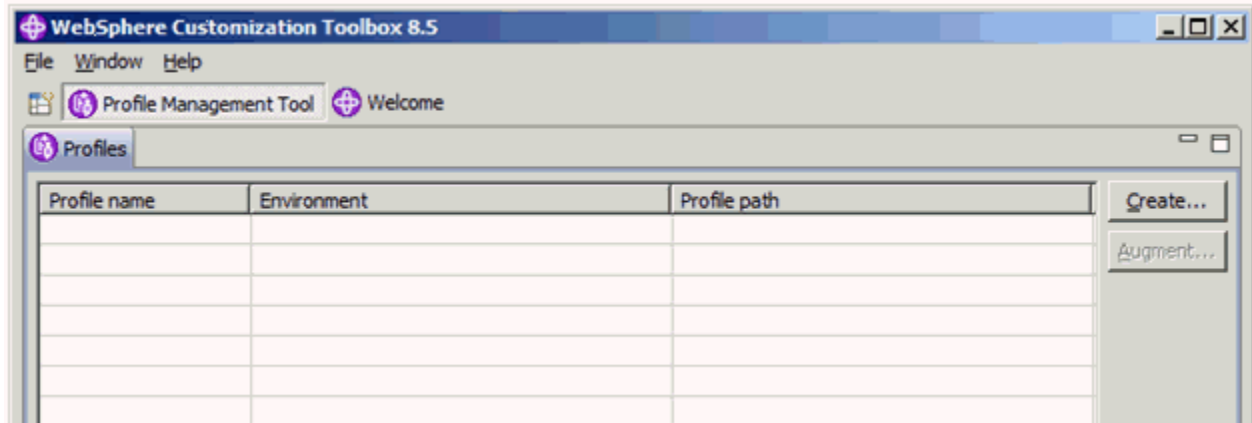
10. On Profile Creation Summary, review the information for correctness. If the information is correct, click the **Create** button to start creating a new profile. Click the **Back** button to change values on the previous panels.



11. On Profile Creation Complete, you can optionally click the checkbox for **Launch the First Steps console** to launch the First steps console to verify the installation. The First Steps console is shown below, where the first step is **Installation Verification**.



12. If you launched the First steps wizard, click **Exit** to return to the WebSphere Customization Toolbox.



13. On WebSphere Customization Toolbox, with the newly created profile displayed, choose File > Close to close the Toolbox application.

Switching to a Supported JDK for WebSphere Express or Developer 8.5.5

Note: WebSphere 9.0. This section is not applicable if you are using WebSphere 9.0.

As of the GA of JD Edwards EnterpriseOne Tools Release 9.2, the supported JDK is 1.8.0.x ().

IBM WebSphere Express 8.5.5 or IBM WebSphere Developer 8.5.5 is shipped with JDK 1.6. Refer to Oracle Certify for details and updated support levels for JDKs with JD Edwards EnterpriseOne. Refer to [Installing a JDK for WebLogic Server](#).

CAUTION: JD Edwards EnterpriseOne supports WebSphere Express 8.5.5 or IBM WebSphere Developer 8.5.5 running with the IBM 32-bit JDK 1.7 only. You must switch the Java level after the installation of WebSphere Express or Developer is completed.

Note: IBM uses the acronym SDK (Software Development Kit) synonymously with JDK (Java Development Kit).

This section discusses these tasks:

- [Installing the IBM 32-bit JDK](#)
- [Set the WebSphere Express or Developer Default JDK for the New Profile](#)

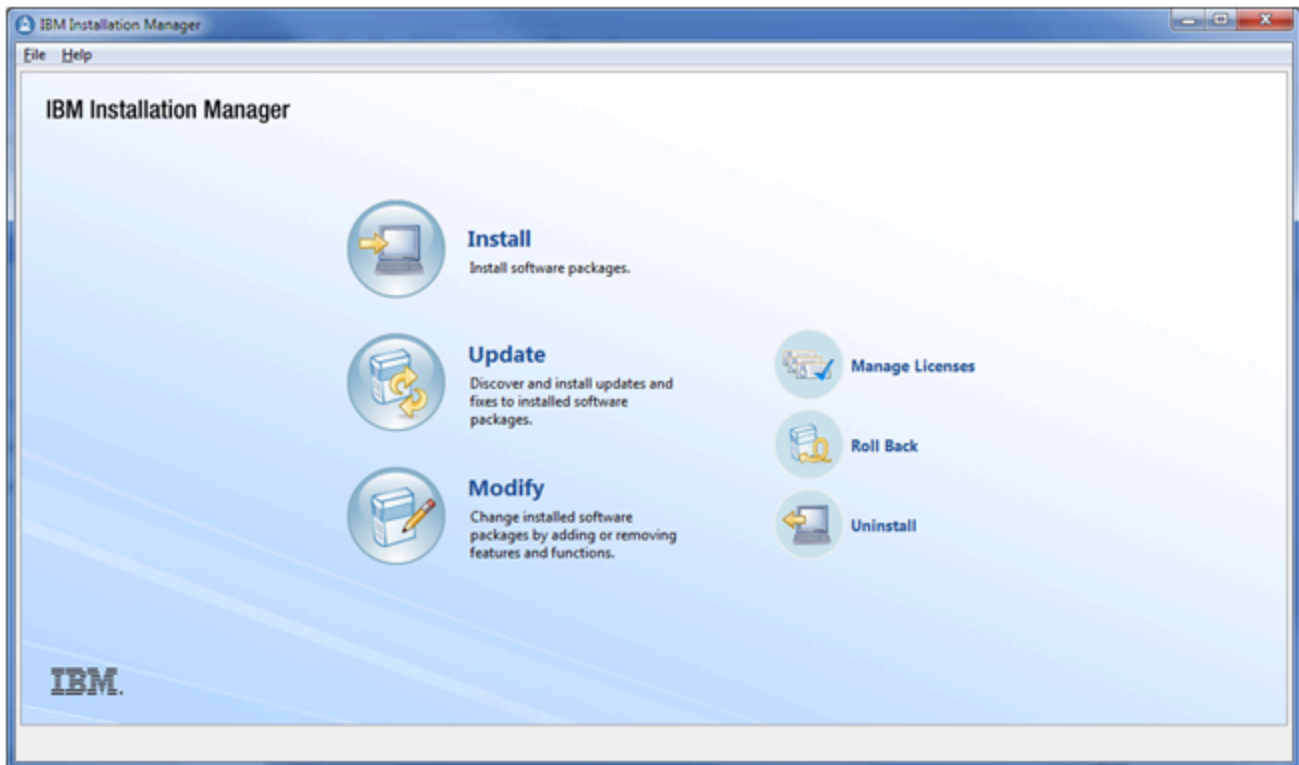
Installing the IBM 32-bit JDK

You must have the IBM Installation Manager installed before you can install the IBM JDK. The IBM Installation Manager is delivered with IBM products such as WebSphere Express or Developer.

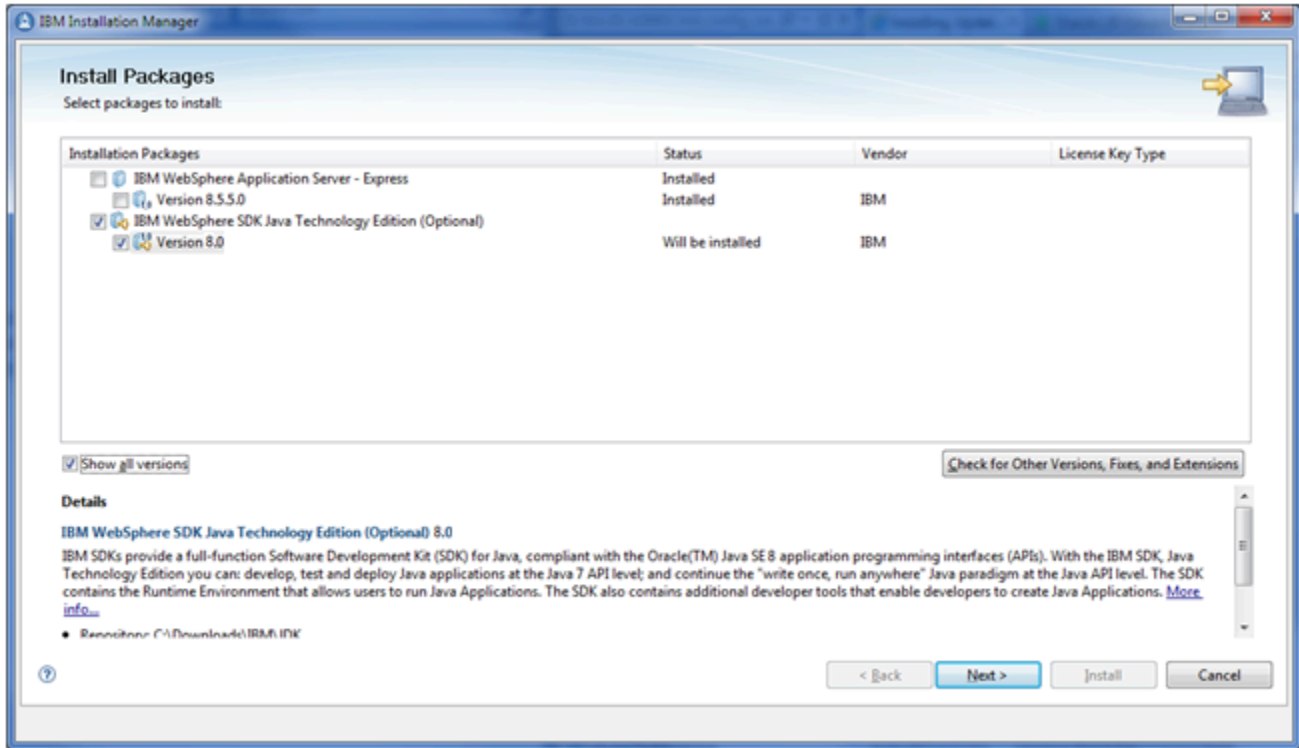
CAUTION: You must use the IBM 32-bit JDK with WebSphere Express or WebSphere Developer and JD Edwards EnterpriseOne.

Use this procedure to install the IBM 32-bit JDK.

1. Run the IBM Installation Manager from the directory in which you extracted the IBM 32-bit JDK.



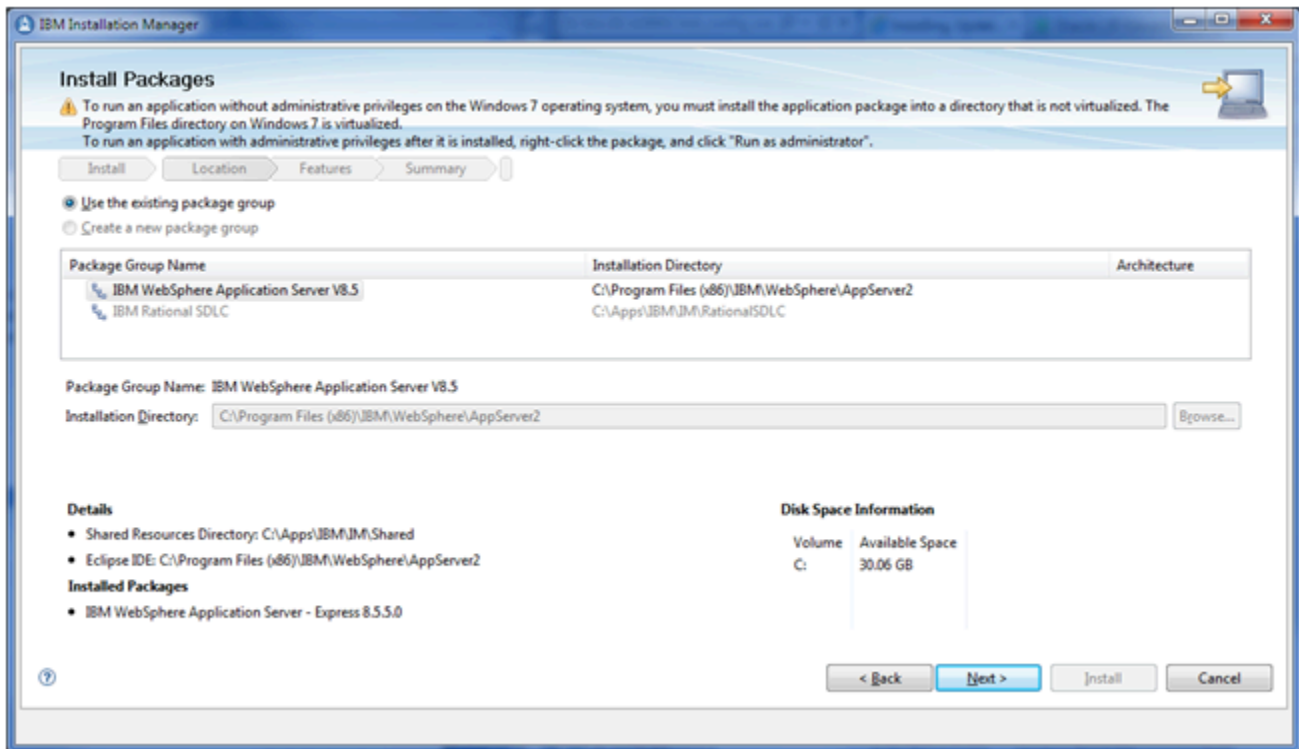
2. On IBM Installation Manager, click **Install**.



3. On Install Packages, Select Packages to install, turn on this checkbox:

IBM WebSphere SDK Java Technology Edition

4. Click the **Next** button.

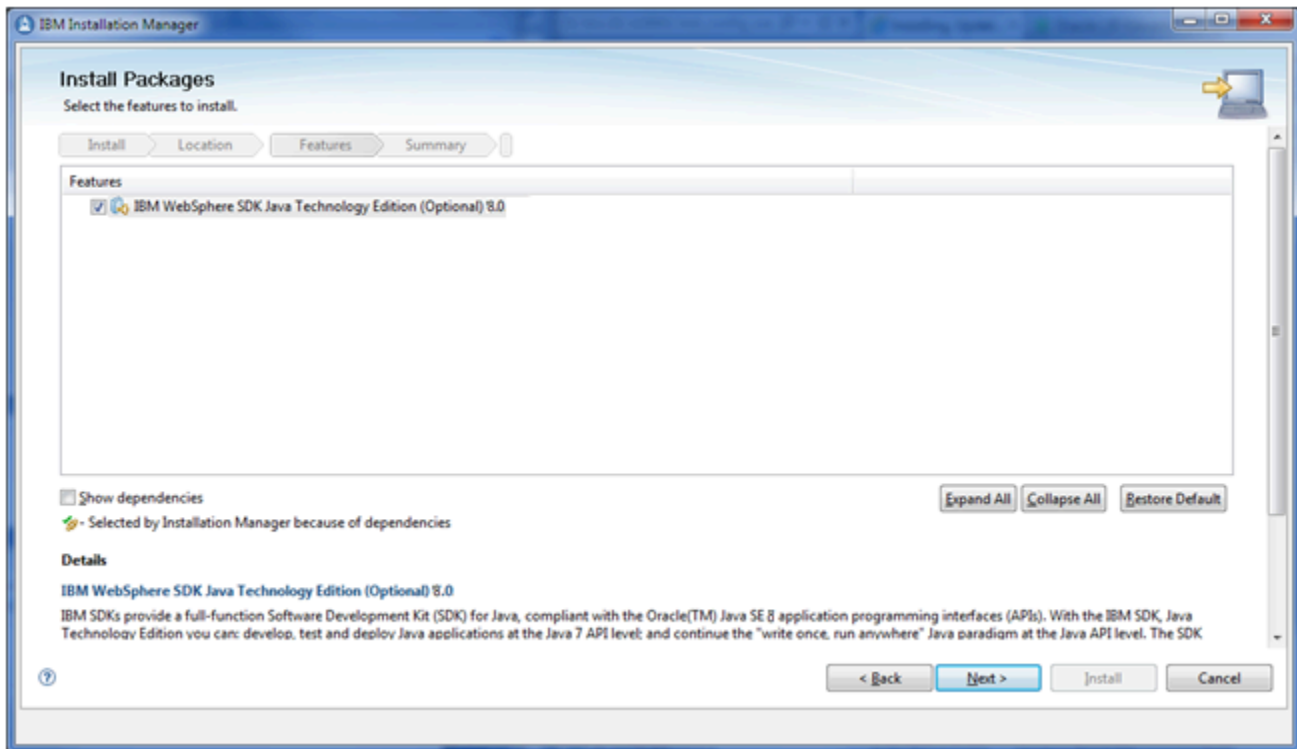


5. On Install Packages, Package Selection, turn on this radio button:

Use the existing package group

You can enter an alternate installation directory in the **Installation Directory** field.

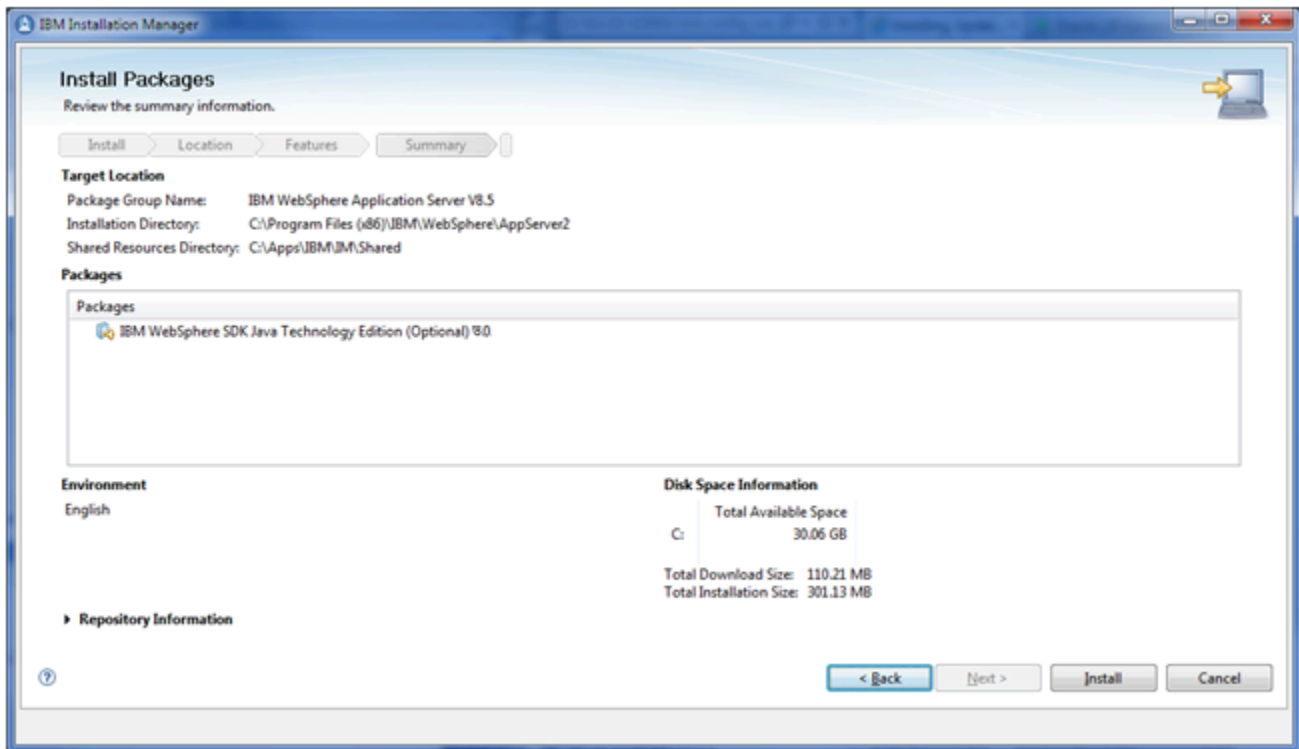
6. Click the **Next** button.



7. On Install Packages, Select Features, you can accept the default value which should mean this checkbox is selected:

IBM WebSphere SDK Java Technology Edition

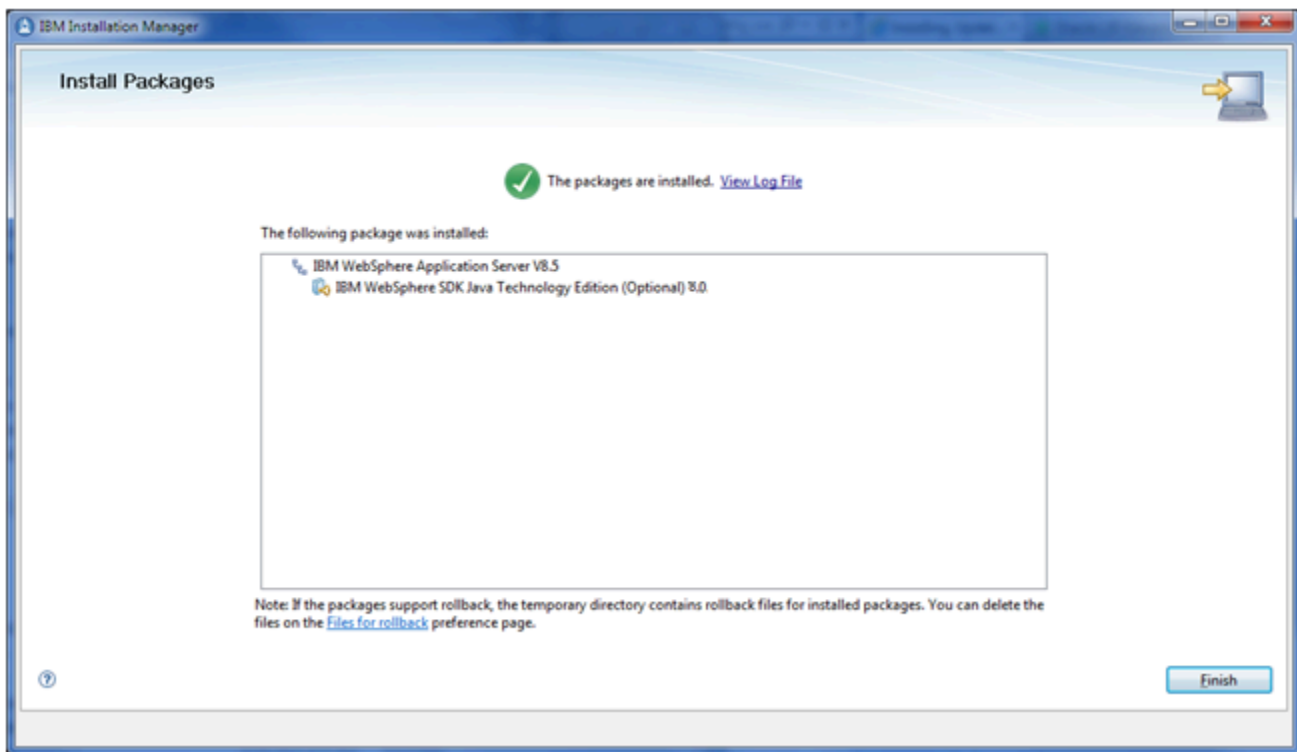
8. Click the **Next** button.



9. On Install Packages, Summary Information, review all the information on this screen, using the scroll bar if necessary.

10. Click the **Install** button.

The following screen indicates the installation completed successfully.



Set the WebSphere Express or Developer Default JDK for the New Profile

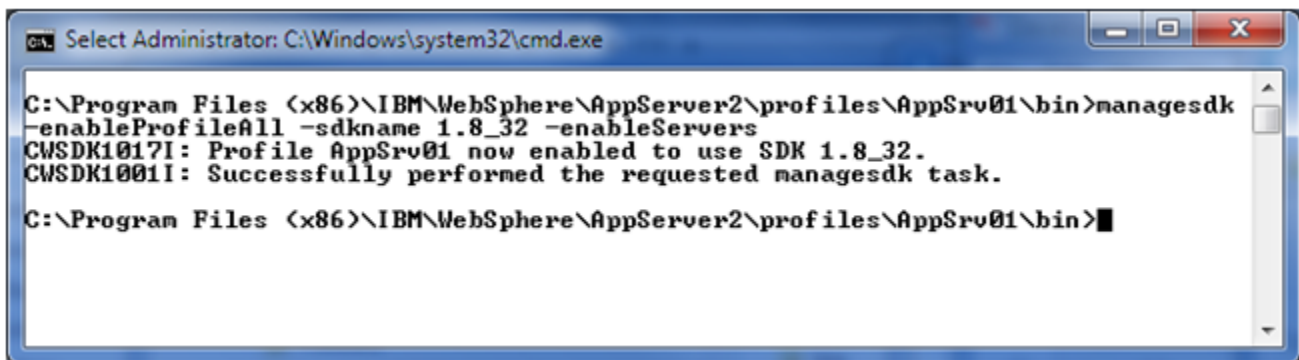
Use this procedure to set the WebSphere Express or Developer default JDK for the profile that you created in the section of this chapter entitled: *Creating a Profile*.

1. Open a command prompt window with Run as administrator.
2. Change directory to the `\bin` directory of the `\profile` directory for your WebSphere Express or Developer. For example:

```
C:\Program Files (x86)\IBM\WebSphere\AppServer2\profiles\AppSrv01\bin
```


3. Run this command:

```
managesdk.bat -enableProfileAll -sdkname 1.8_32 -enableServers
```



The screenshot shows a Windows command prompt window titled "Select Administrator: C:\Windows\system32\cmd.exe". The window content is as follows:

```
C:\Program Files (x86)\IBM\WebSphere\AppServer2\profiles\AppSrv01\bin>managesdk  
-enableProfileAll -sdkname 1.8_32 -enableServers  
CWSDK1017I: Profile AppSrv01 now enabled to use SDK 1.8_32.  
CWSDK1001I: Successfully performed the requested managesdk task.  
C:\Program Files (x86)\IBM\WebSphere\AppServer2\profiles\AppSrv01\bin>
```

CAUTION: If you create a new WebSphere Express or Developer profile in the future, you will need to rerun the above command.

6 Installing the Oracle Local Database (Invalid with Release 9.2.5 and forward)

Installing the Oracle Local Database (Invalid with Release 9.2.5 and forward)

Note: This procedure only applies to JD Edwards EnterpriseOne releases prior to Release 9.2.5. Beginning with 9.2.5, the requirement for a local Oracle database on the Development Client is obviated.

Complete this chapter to install the local Oracle Enterprise Edition (OEE) database that the Development Client will use.

If you encounter errors during the installation process, refer to these troubleshooting chapters:

- *Oracle Database 12c Considerations*
- *Using InstallManager to Install a Local Database*

CAUTION: It is very important that no files exist in the **E1Local** subdirectory when you attempt to install the OEE database. If any files do exist, the OEE installation will probably fail.

CAUTION: Be sure to follow the guidelines in the preceding sections of this guide entitled:

- *Microsoft Windows Security*
- *Minimizing Locked Files*

If you have not already installed the database engine and a database called **E1Local** does not exist on your Development Client, use the procedures in this section to install these requisite components before installing the JD Edwards EnterpriseOne Development Client. If the local database engine is already installed and an **E1Local** database exists, you can skip this chapter.

CAUTION: You can run the JD Edwards EnterpriseOne program InstallManager to install the local database into any location. However it is strongly recommended that you **not** choose a directory that contains space characters in the directory name. Avoiding such directory names will avoid the possibility of issues arising later due to known issues with such directory names.

Note: For instructions on launching InstallManager to install the local Oracle database with default parameters, refer to the section entitled: *Using InstallManager to Install a Local Database*. For instructions on manually launching the `OEE12Setup.exe` program to install the local Oracle database with optional parameters, refer to the appendix of this guide entitled "Running OEE12Setup.exe from the Command Line".

This section discusses these topics:

- *Oracle Database 12c Considerations*

- *Using InstallManager to Install a Local Database*

Oracle Database 12c Considerations

Starting with Oracle Database 12c, Oracle supports the use of an Oracle Home User who will own the install of the database. This user must **not** have Microsoft Windows Administrator (admin) rights. Note that in this context, the user is the local Microsoft Windows user, not a database user.

CAUTION: Do **not** install the Oracle Database 12c into an existing Oracle Base directory. For example, do **not** install into this directory if it already exists: `c:\oracle`. If you attempt to install to an existing Oracle directory, the `oee12setup.exe` installer will likely fail. Later releases of this installer may be able to programmatically resolve this issue.

This section discusses these topics:

- Prerequisites to Running the OEE12Setup.exe Program
- Specifying the Oracle Home User and Oracle Base Directory
- *Manually Creating Oracle Home User*

Prerequisites to Running the OEE12Setup.exe Program

Tools Release 9.2.2 Considerations. The OUI installer delivered by Tools Release 9.2.2 is upgraded to a newer version of OUI itself. You may encounter issues if you use a newer version installer to install a package on an existing Development Client installation that used the older version installer. Although not required, Oracle highly recommends that the older Development Client installation either be uninstalled or saved using Snapshot before running a new installer. Furthermore the new installer for 9.2.2 requires an uplift to the latest JRE/JDK as listed in the Oracle Certifications for the Development Client.

The `oee12setup.exe` program is used to install the local Oracle 12c database. This program is called from the InstallManager program when you click on this link:

[EnterpriseOne Database Engine](#)

Optionally you can also manually launch the `oee12setup.exe` program to perform optional functions. In either case (InstallManager or manually), prior to running the `oee12setup.exe` program, ensure that this Microsoft Windows system variable either does not exist, or if it does that it points to a valid JDK:

JAVA_HOME

Otherwise, the `oee12setup.exe` program will fail to execute and return an error stating the JDK is invalid.

Note: For instructions on launching InstallManager to install the local Oracle database with default parameters, refer to the section entitled: *Using InstallManager to Install a Local Database*. For instructions on manually launching the `oee12setup.exe` program to install the local Oracle database with optional parameters, refer to the appendix of this guide entitled "Running OEE12Setup.exe from the Command Line".

Manually Creating Oracle Home User

If you cannot use the `oee12setup.exe` program to create the Oracle Home User, you can create the user manually using the steps described in this section.

To create a Microsoft Windows user, launch **Local Users and Groups** management console using this navigation:

Control Panel > Administrative Tools > Computer Management > System Tools > Local Users and Groups

1. On Local Users and Groups (Local)\Users, in the left pane, select **Users**.
2. Right click and select **New User**.
3. On New User, complete these fields:
 - o *User name:*
Enter a name for the user. For example, **e1dbuser**.
 - o *Password and Confirm Password*
Enter and confirm the password for the user.
 - o Ensure this checkbox is **not** checked:
User must change password at next logon
4. Click the **Create** button.

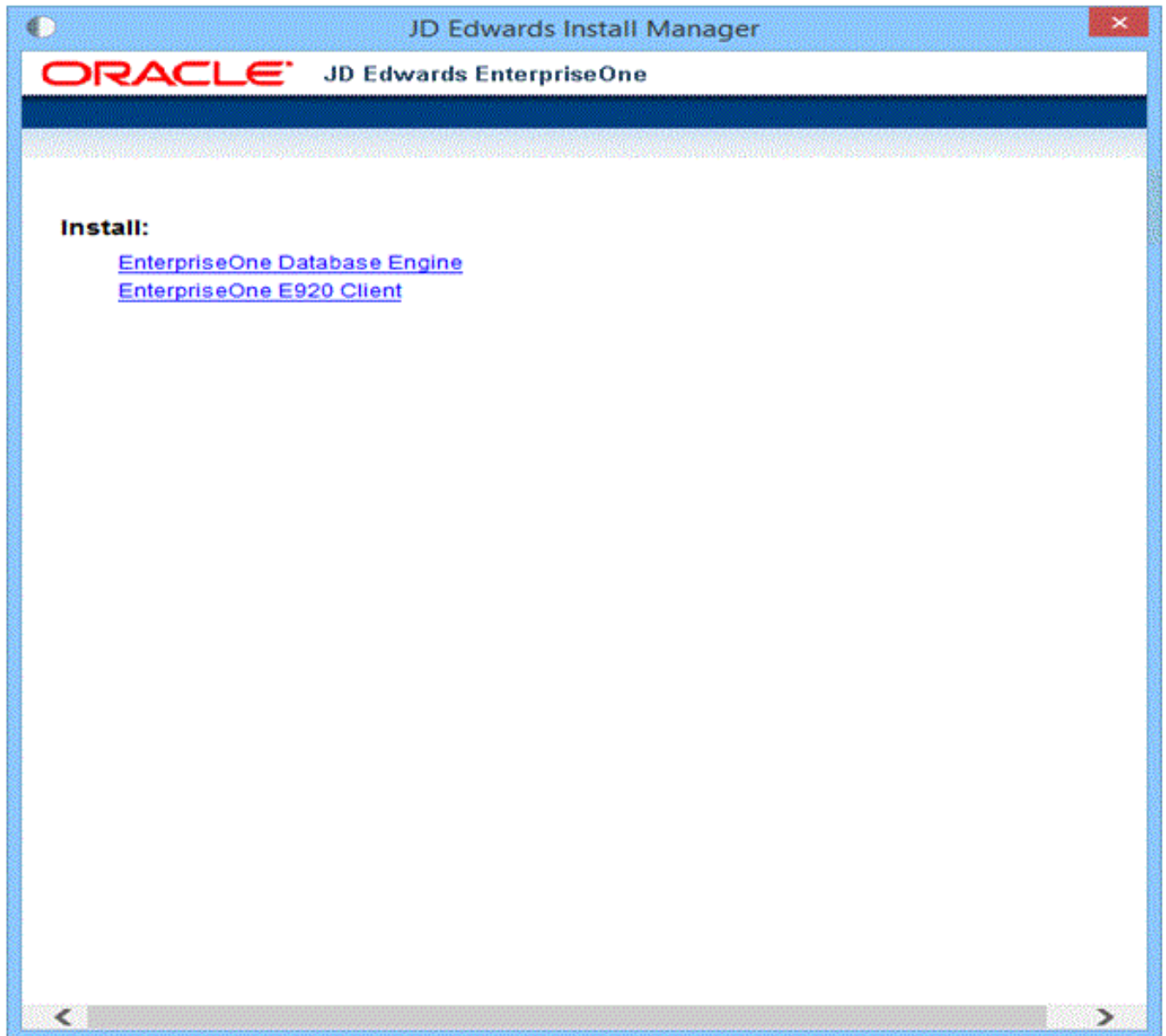
Using InstallManager to Install a Local Database

In most cases, your JD Edwards EnterpriseOne administrator will have already downloaded and prepared the local database installer for you to install on your Development Client. If so, the administrator should be able to provide you with the location of `InstallManager.exe`. In that case, in the following procedure you can skip to Step 4. If not, start with Step 1.

1. Obtain the appropriate disk images from Oracle Software Delivery Cloud for the local database you wish to install on your Development Client.
2. Log on to the Development Client as a user with Administrator rights.
 - CAUTION:** Ensure that the Administrator account name that you use does not contain any special characters.
3. If you have not already done so, expand all disk images to be under a common directory called Disk1 on your Development Client.

4. Right-click on the `InstallManager.exe` program (either in Disk1 or on your Deployment Server) and select **Run as Administrator**.

CAUTION: For Microsoft Windows, you must right-click on the executable and select **Run as Administrator** from the drop-down. Likewise, if you have a shortcut assigned to `InstallManager.exe`, you must either configure the shortcut to always run as administrator or right click the shortcut and choose **Run as Administrator**.



5. On JD Edwards Install Manager, select this link to install the local OEE database:

[EnterpriseOne Database Engine](#)

6. On User Account Control, click the **Yes** button to launch the `oEE12Setup.exe` installer.



7. If you receive an Install Manager - Security warning dialog with the message "The publisher could not be verified", click the **Run** button to continue the execution of the `oEE12Setup.exe` program to install the local Oracle database.
8. On OEE12Setup, in the Oracle Home User section, you must select an Oracle Home User. For security purposes, Oracle recommends that you specify a standard Windows user account (that is, an account that is not in the

Administrator group of the computer). The `oee12setup.exe` program will not allow you to specify an account that has Administrator privileges. Valid choices are:

- o **Use existing Windows User**

Choose this option if you want to use an existing account for a Windows user. This user must not have Administrator privileges. You must specify a valid **User Name** and associated **Password** for the user.

For instructions on how to manually create an Oracle Home User, refer to the section entitled: *Manually Creating Oracle Home User*.

- o **Create New Windows User**

Choose this option if you want `oee12setup.exe` to create an account for a Windows user without Administrator privileges. You must specify a valid **User Name** and associated **Password** and **Confirm Password** for the user. Be sure to record and remember this password.

Note: OEE12Setup Fails to Create the User. If the `oee12setup.exe` program fails to create the user it might be because the password does not meet the password complexity policy requirements of your computer. You can try again with a more complex password, or exit. If you are unable to create the user using the `oee12setup.exe` interface, you should try to create it manually and rerun `oee12setup.exe`. Refer to the next section entitled: *Manually Creating Oracle Home User*.

Tip: Password Complexity Policy. The Administrator user of the Microsoft Windows machine determines the password complexity policy for each machine. Additionally, such policies vary according to the server or client version of Microsoft Windows. The `oee12setup.exe` program cannot programmatically determine and return these policy requirements. Therefore it is beyond the scope of this documentation to guide the end user to determine the exact policy requirements for user names and their associated passwords.

- o **Use Windows Built-in Account**

This selection is equivalent to legacy JD Edwards EnterpriseOne functionality for releases prior to Tools Release 9.2.

CAUTION: For strongest security, Oracle recommends that you do not use the Windows built-in user account. To provide optimal security, you should install and configure with a Windows User Account with limited privileges. For additional details on the Oracle policy regarding **Supporting Oracle Home User on Windows**, refer to this link: http://docs.oracle.com/database/121/NTQRF/oh_usr.htm

If you choose this selection, you are presented with the following dialog where you must confirm that you understand the security impact of this selection.

Click the **Yes** button to confirm and continue, or the **No** button to exit the `oee12setup.exe` program.

9. On OEESetup, in the Oracle Base Directory section, enter the path where you want to install the local Oracle database. It is recommended that you install the Oracle database into its own root directory and not into any other Oracle base directory used by another Oracle product, such as `c:\ORACLE`. If you accept the default

location (which is `c:\oracle`), some auxiliary files are installed in that location while the local Oracle database itself will be installed in the location you specified, such as:

`C:\E1Local`

CAUTION: Do **not** install the Oracle Database 12c into an existing Oracle Base directory. For example, do **not** install into this directory if it already exists: `c:\oracle`. If you attempt to install to an existing Oracle directory, the `OEE12Setup.exe` installer will likely fail. Later releases of this installer may be able to programmatically resolve this issue.

CAUTION: Do not include the string `E1Local` in the path. For example, if you specified `c:\oracle\E1Local` as the base install path, the local Oracle database will be installed in this location: `c:\oracle\E1Local\E1Local`.

10. On `OEE12Setup`, click the **OK** button to accept the selected values. If the values are valid the `OEE12Setup.exe` program proceeds to install the local Oracle database.

CAUTION: You must reboot your machine before continuing with the installation of the JD Edwards EnterpriseOne Development Client as described in the section in this guide entitled: *Installing the Development Client and Web Client Features (WLSH4A and WASH4A)*.

7 Working with the Oracle Database Client

Working with the Oracle Database Client

If your EnterpriseOne Development Client will connect to an Oracle database (that is, an enterprise database that resides on a database server), you must install a 64- or 32-bit version of the Oracle database client and then copy your `tnsnames.ora` file to a subdirectory under the database client installation directory.

Note: 64- vs. 32-bit Oracle database drivers. The JD Edwards EnterpriseOne Development Client loads Oracle database driver DLLs to connect to an Oracle database. The bitness of the Oracle database driver DLLs **must match** the bitness of the JD Edwards EnterpriseOne Development Client. These Oracle database driver DLLs are provided by an Oracle database client. Therefore, you need to install an Oracle database driver client of the same bitness as the EnterpriseOne Development Client.

Obtaining the Oracle Database Client

To obtain an Oracle database client:

1. Download the 64- or 32-bit Oracle 12c database client from the Oracle Software Delivery Cloud located at this link:
<http://edelivery.oracle.com>
2. On Oracle Software Delivery Cloud, select **Download Package** in the drop-down list.
3. In the **Search** field, enter this string:
Oracle Database Enterprise Edition
4. Click **Search**
5. On Oracle Software Delivery Cloud, in the **Select Products** pulldown, select this checkbox:
Microsoft Windows x64 (64-bit)
6. Click the **Continue** button.
7. On Oracle Software Delivery Cloud, in the Found Results list, click the **Select** button next to the version of the Oracle Database Enterprise Edition that is listed in the Oracle Certifications for use with the JD Edwards EnterpriseOne Development Client.
8. Click **View Items** and then **Continue**.
9. Expand the entry Oracle Database Enterprise Edition by clicking the arrow to the left of the release name. Under the expanded entry for **Oracle Database Enterprise Edition**, uncheck all checkboxes except this:
Oracle Database Client
10. In the Platforms/Languages column, click the drop-down arrow and select this checkbox:
 - o If EnterpriseOne is 32-bits:
Microsoft Windows (32-bit)
 - o If EnterpriseOne is 64-bits:
Microsoft Windows x64 (64-bit)

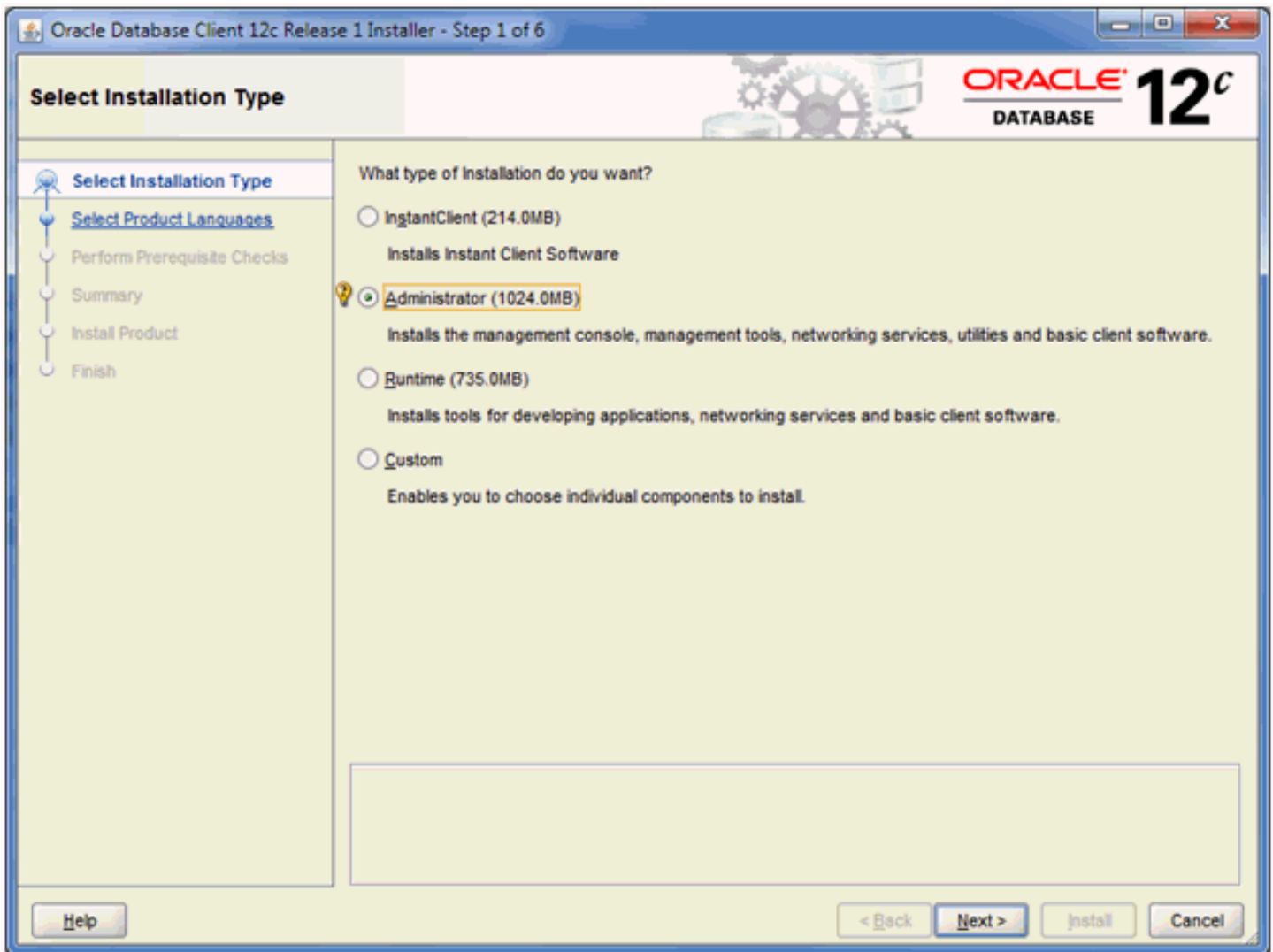
11. Click outside the dropdown list and click the **Continue** button.
12. Review the Oracle Standard Terms and Restrictions license agreement, turn on the **Accept** checkbox and click **Continue**.
13. Ensure that a checkmark exists next to the file(s) to download.
14. Click the **Download** button.
15. Save the downloaded file to your computer.
16. Extract the contents of the downloaded file.

Installing the Oracle Database Client

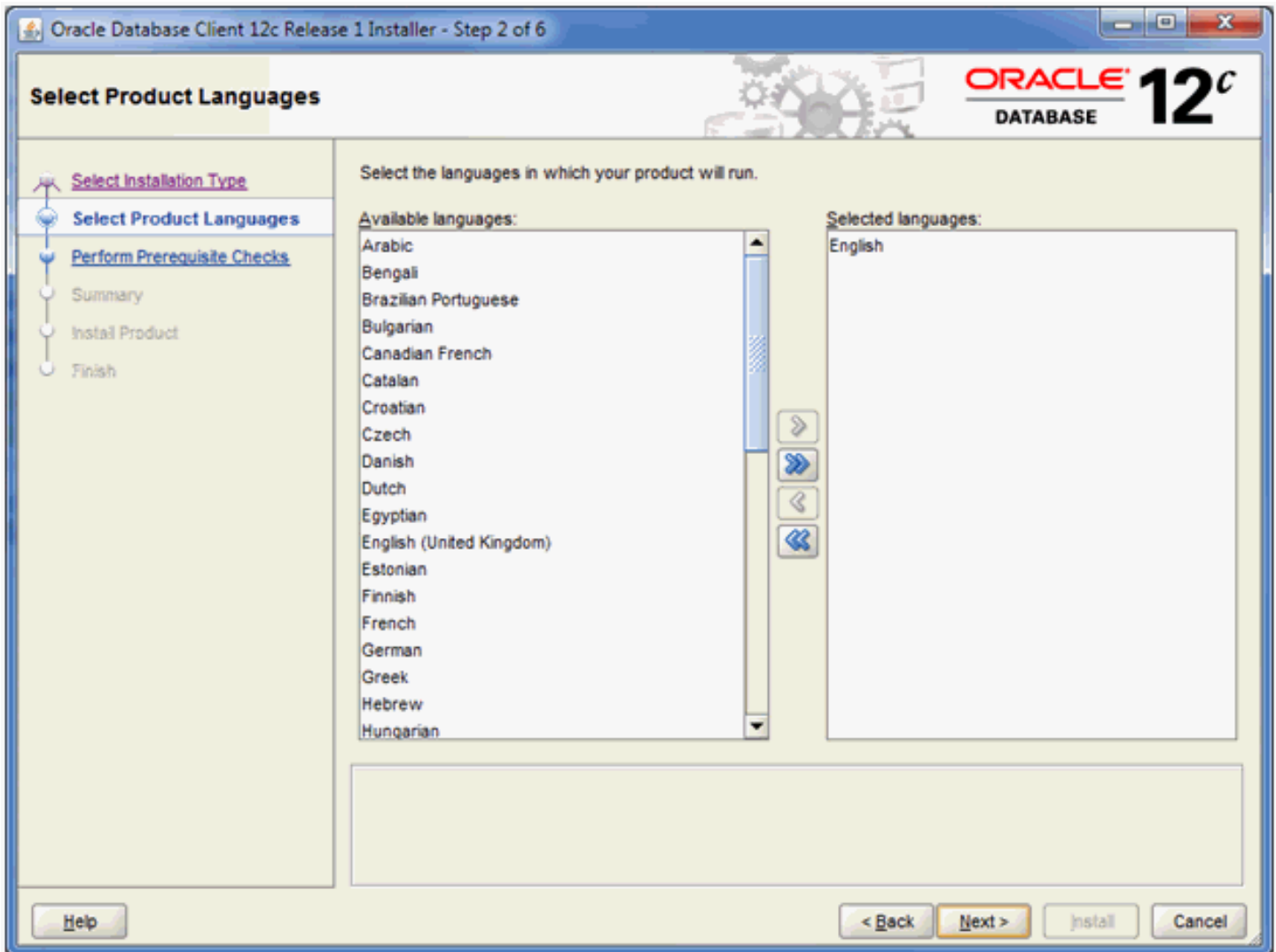
To install an Oracle database client:

1. In the directory where you expanded the download in the previous step in this chapter, run this setup file to start the Oracle database client installer:

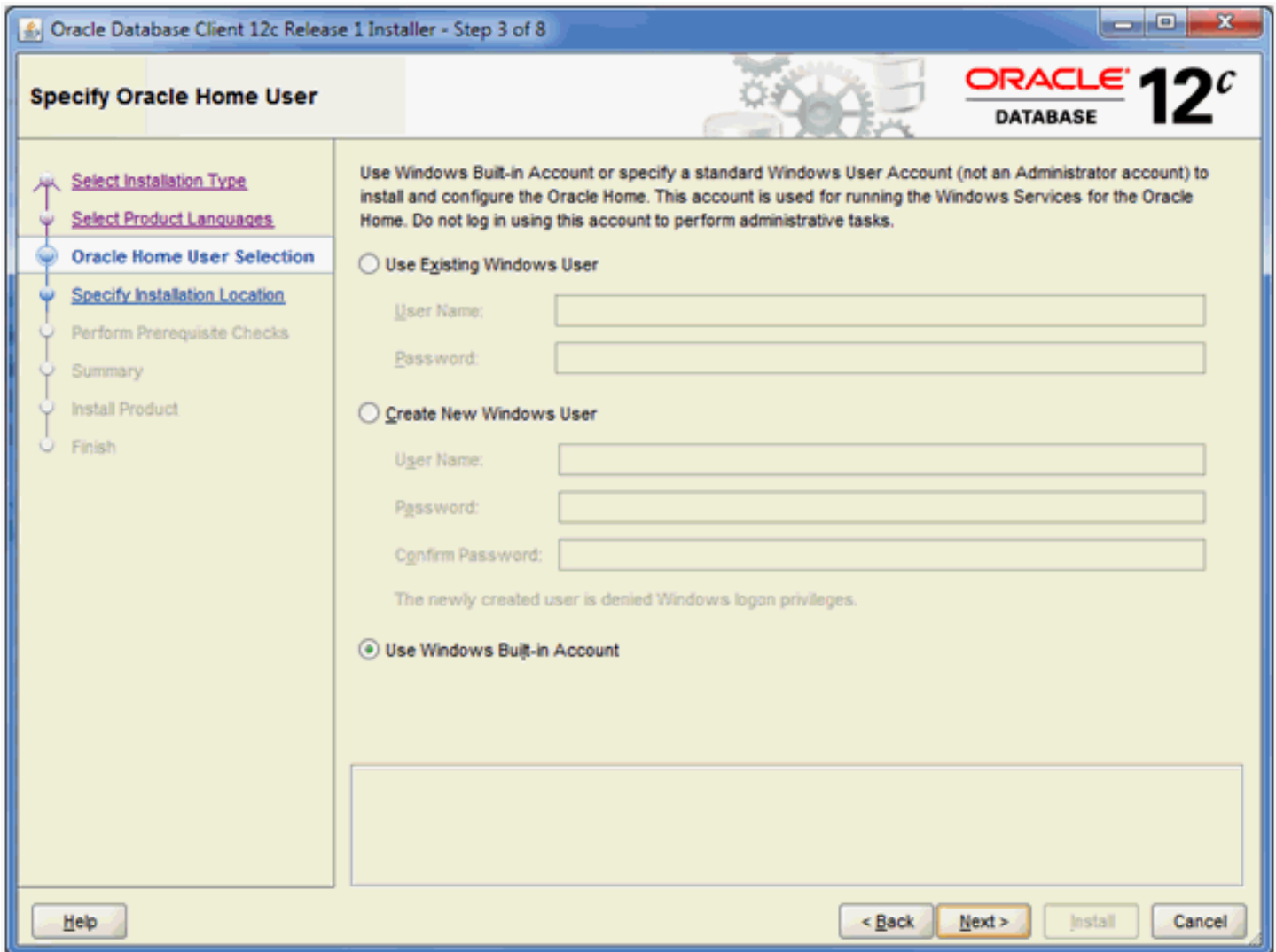
`\client32\setup.exe`



2. On Step 1 of 6, select the **Administrator** radio button and click the **Next** button.



- On Step 2 of 6, select the **English** language from the list of **Available languages** and click the **Next** button.

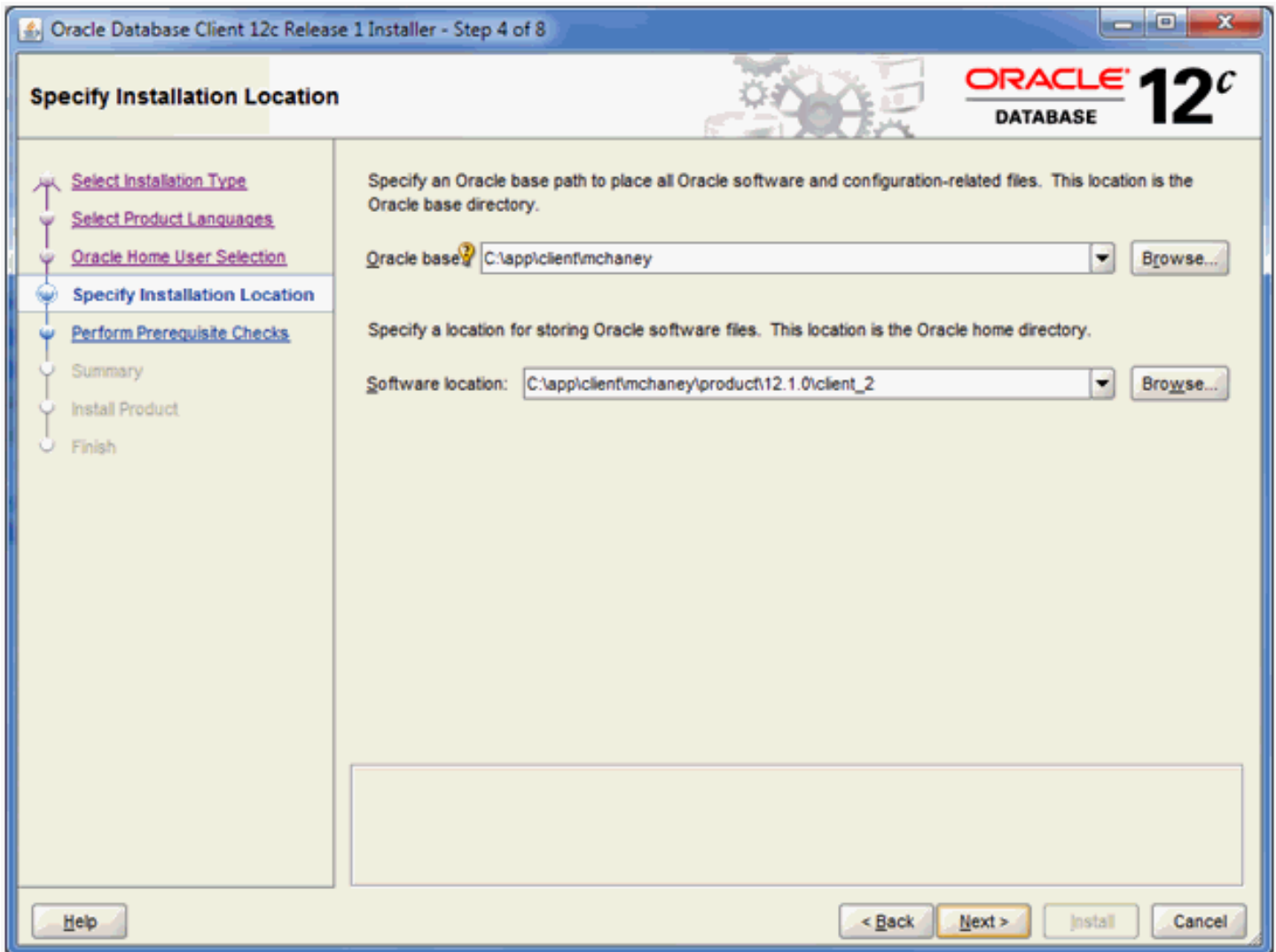


- On Step 3 of 8, you can accept the default value which is:

Use Windows Built-in Account

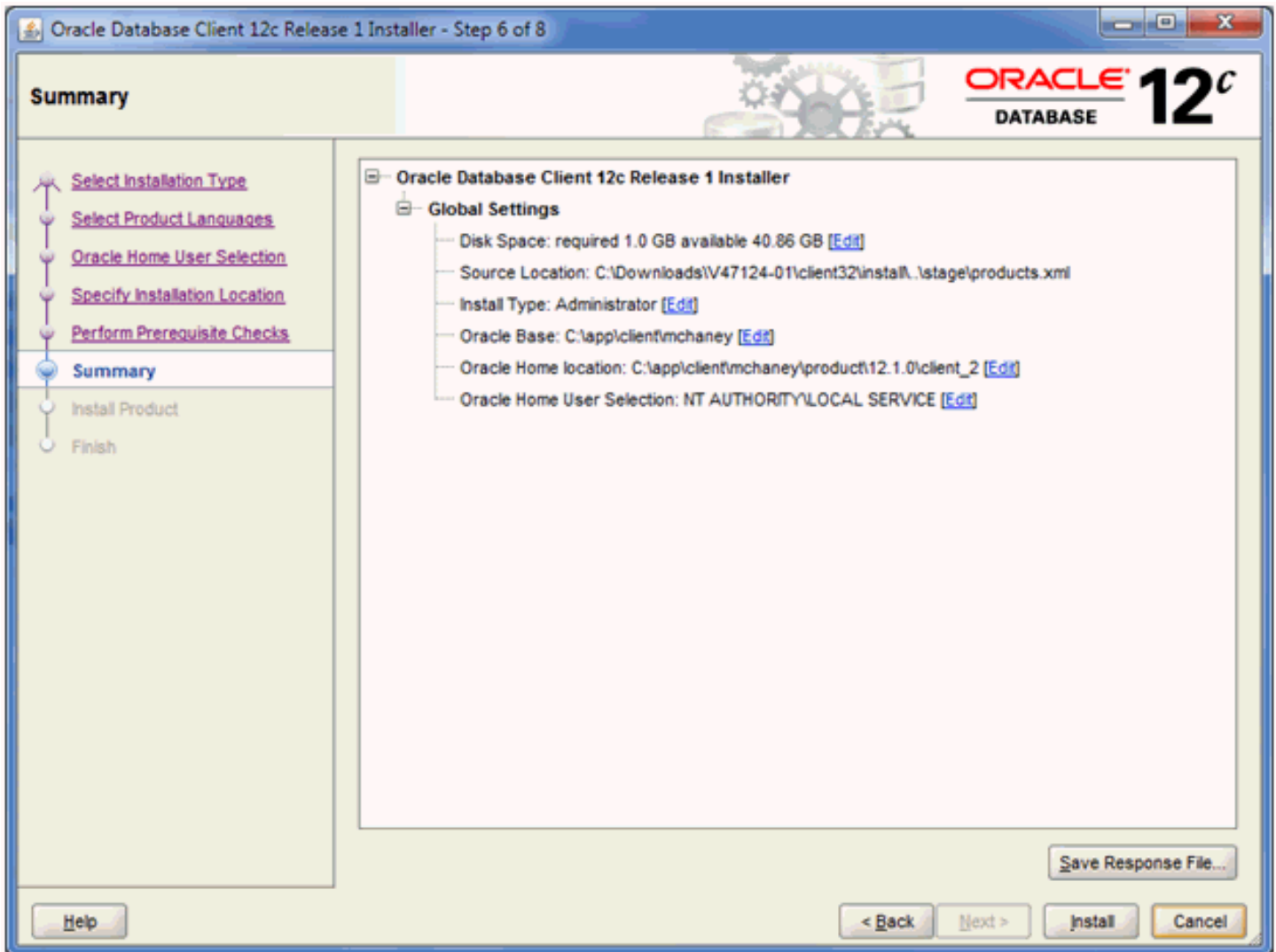
Note: Unlike the installation of the database where Oracle recommends not using the built-in account, this option for the database client is acceptable.

5. Click the **Next** button.

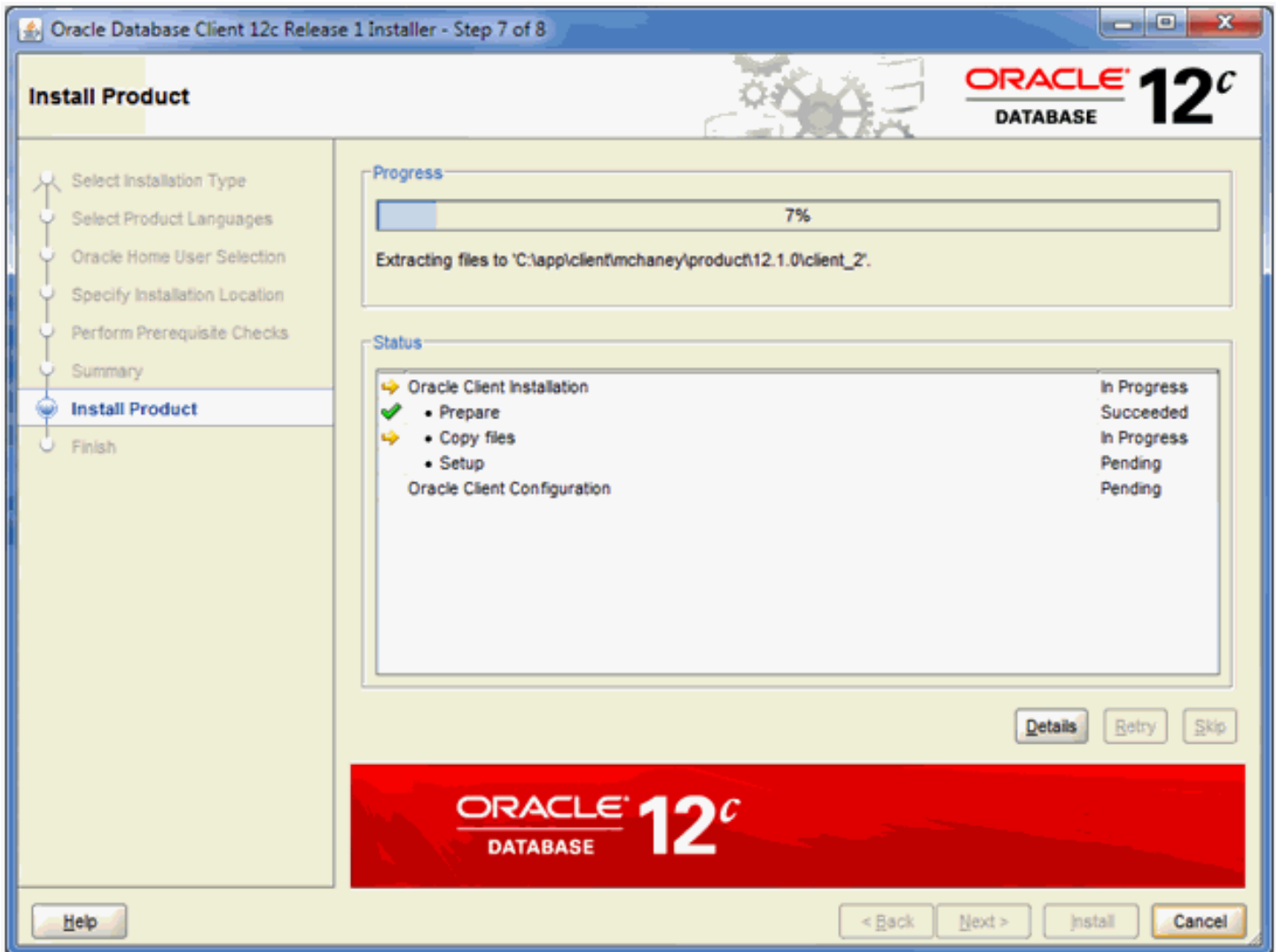


6. On Step 4 of 8, enter path values for the **Oracle base** and **Software location**.

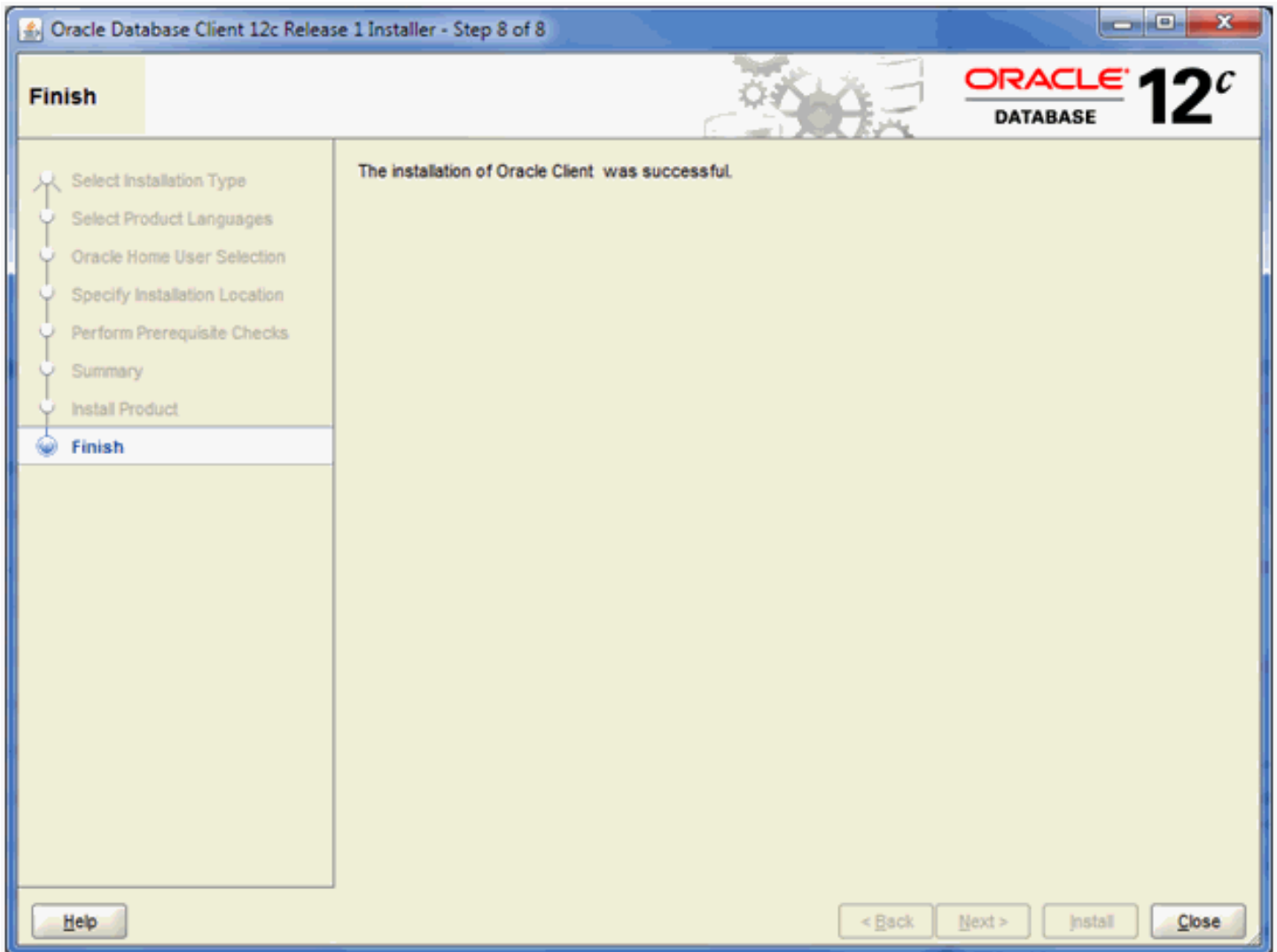
7. Click the **Next** button.



8. On Step 6 of 8, verify the **Global Settings** and click the **Install** button.



9. On Step 7 of 8, the installer displays the **Progress**.



10. On Step 8 of 8, the installer indicates the installation was successful. Click the **Close** button to exit the installer.

Copy the tnsnames.ora File

In order for your Oracle database client to function properly, you must copy the `tnsnames.ora` file:

From:

```
\\<deployment server name>\<release>\client
```

To:

```
<Oracle Client Install Dir>\network\admin
```

8 Working with the Database Client for TLS

General

If your JD Edwards EnterpriseOne Development Client will connect to an enterprise database that resides on a database server, you must install a database client.

You must obtain the database client from your database vendor and install it on the JD Edwards EnterpriseOne Development Client.

Your JD Edwards EnterpriseOne administrator may provide you with a batch file that sets up the ODBC data sources for the database client to connect to a TLS-enabled database server. Otherwise you may need to manually configure the port. Refer to the *JD Edwards EnterpriseOne System Administration Guide* for details.

Additionally for the JD Edwards EnterpriseOne Development Client, you will need to manually perform configuration for TLS connectivity. Refer to the following section of this guide entitled: "Importing a TLS Certificate File".

Importing a TLS Certificate File

Use this procedure to configure Transport Layer Security (TLS) to import a TLS certificate file to enable your database client to connect to a TLS-enabled database.

1. Obtain the database certificate file from your JD Edwards EnterpriseOne administrator. For example, the certificate might be called:

```
cacert.crt
```

2. Copy the certificate file to a directory on your Development Client, for example:

```
C:\certs
```

3. If you are using EnterpriseOne H4A, determine which JDK the H4A is using, where the possibilities are Oracle WebLogic or IBM WebSphere.

- a. If using WebLogic, edit the below file and note the value of the JAVA_HOME entry:

```
\oui\globalEnv.properties
```

- b. If using WebSphere, note the location of the below directory:

```
<WebSphere_install_dir>\AppServer\java
```

4. Import the certificate file to the Java trust store using these steps:

- a. Open a command prompt window with **Run as Administrator**.

- b. Change directory to the bin directory of the JDK that you determined in the previous step. For example:

```
cd C:\Program Files\Java\jdk1.8.0_341\bin
```

- c. Run this command:

```
keytool -import -alias <alias> -keystore <keystore_path> -file  
<certificate_file>
```

where

<alias> is a name for the certificate

<keystore_path> is the path to the JRE keystore; enclose in double quotes if the path contains a space

<certificate_file> is a file containing the certificate to import; enclose in double quotes if the path contains a space

For example:

```
keytool -import -alias db2key -keystore "C:\Program
Files\Java\jdk1.8.0_341\jre\lib\security\cacerts" -file
c:\certs\db2.crt
```

- d. When prompted for the keystore password, enter the password for the keystore.
- e. When prompted to trust the certificate, enter: y

Modifying the jdbj.ini File

Use this procedure to modify the `jdbj.ini` file on your Development Client.

1. If using WebLogic Server, locate these files:

```
<E1_install_dir>\system\JAS\EA_JAS_80.ear\webclient.war\WEB-INF\classes\jdbj.ini
```

```
<E1_install_dir>\system\classes\jdbj.ini
```

```
<E1_install_dir>\<pathcode>\ini\jdbj.ini [modify only if this file
exists]
```

2. If using WebSphere, locate these files:

```
<E1_install_dir>\JAS\EA_JAS_80.ear\webclient.war\WEB-INF\classes\jdbj.ini
```

```
<E1_install_dir>\system\classes\jdbj.ini
```

```
<E1_install_dir>\<pathcode>\ini\jdbj.ini [modify only if this file
exists]
```

3. Edit the `jdbj.ini` file to update this entry:

```
[JDBj-BOOTSTRAP DATA SOURCE]
serverPort=<value>
```

Note: This value should correspond to the value of the TLS port on your Enterprise database server. This value should be provided by your EnterpriseOne administrator.

4. Edit the `jdbj.ini` file to include this entry:

```
[JDBj-RUNTIME PROPERTIES]
useTLS=true
```

9 Installing the Development Client and Web Client Features (WLSH4A and WASH4A)

Installing the Development Client and Web Client Features (WLSH4A and WASH4A)

This chapter describes installing the Development Client. Optionally, the Web Client may be installed during the Development Client installation or during a separate installation. As described earlier in this document, the Web Client uses an application server that processes requests from a browser and then returns the results back to the browser. The application server may be either Oracle WebLogic Server, IBM WebSphere Express, IBM WebSphere for Developers, or WebSphere 9.0.

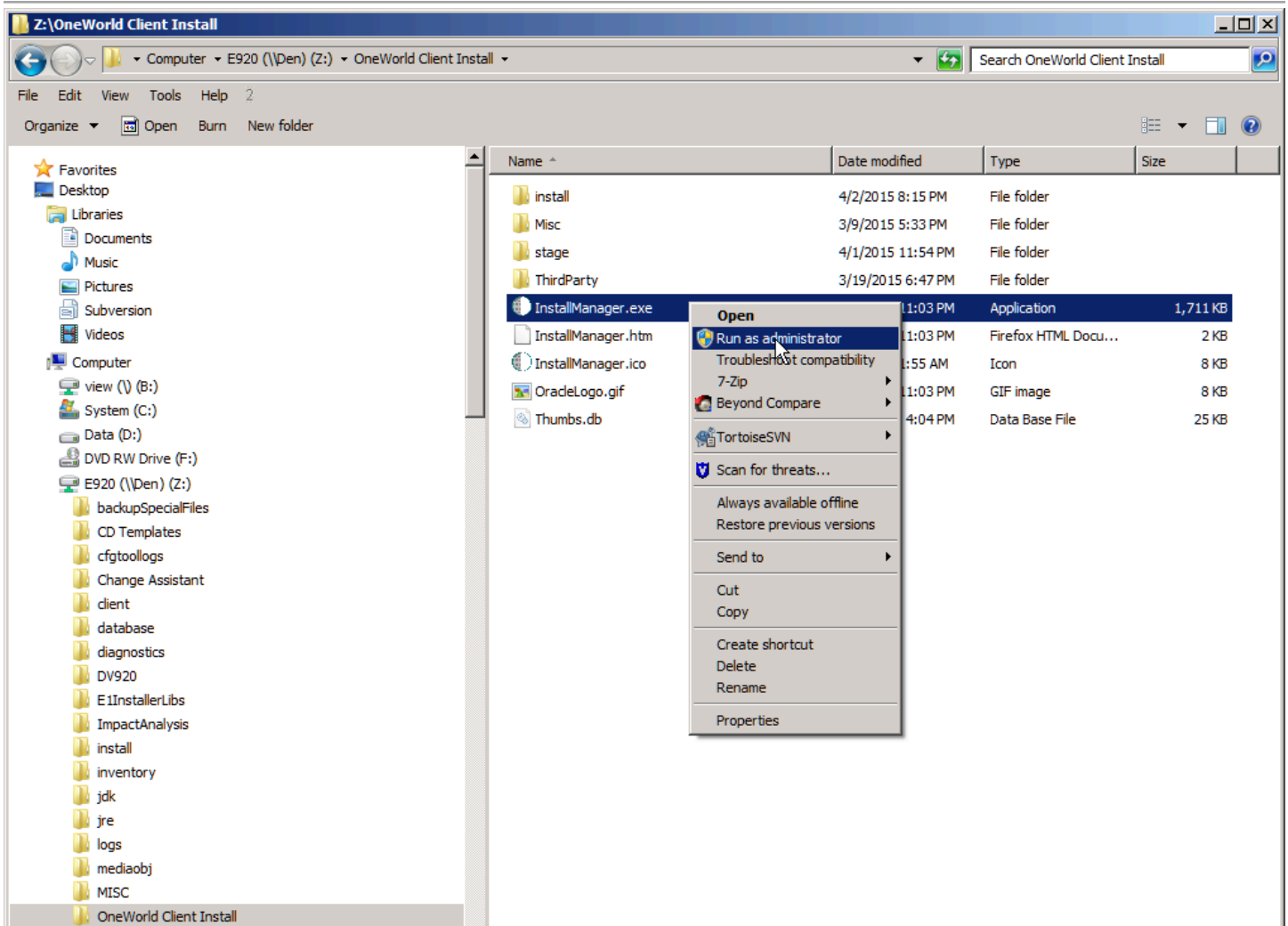
Note: **Tools Release 9.2 Update 2.** The existing installer H4A85 is renamed to WASH4A and is enhanced to support IBM WebSphere 9.0 along with existing support of IBM WAS 8.5.5.

Note: To include the Web Client installation in the Development Client installation process, a JD Edwards EnterpriseOne Administrator would define a feature and include that feature in the package to install. For details on these package builds, refer to the *JD Edwards EnterpriseOne Deployment Server Reference Guide* in the chapter entitled: *Working With the Full Client Package*. In addition to Web Client Features, a client package can include additional features that perform tasks such as installing the Visual Studio runtime libraries. Refer to the appendix of this guide entitled: *Using the Microsoft Visual C++ Compiler*.

CAUTION: This document concentrates on using the latest releases of E1 Tools, E1 Applications, and OEE. However in some cases, it is possible to mix old or new releases of E1 with various versions of the OEE database. For example, an Applications 9.1 package can be installed on a computer with OEE 12c or 11gR2 installed. Special considerations need to be observed when doing this. See *Mixing Releases of EnterpriseOne Development Client and OEE*.

Installing the Development Client

The InstallManager program is the JD Edwards EnterpriseOne front-end program used to launch the OUI installer for the Development Client. Locate and run this program as described below.



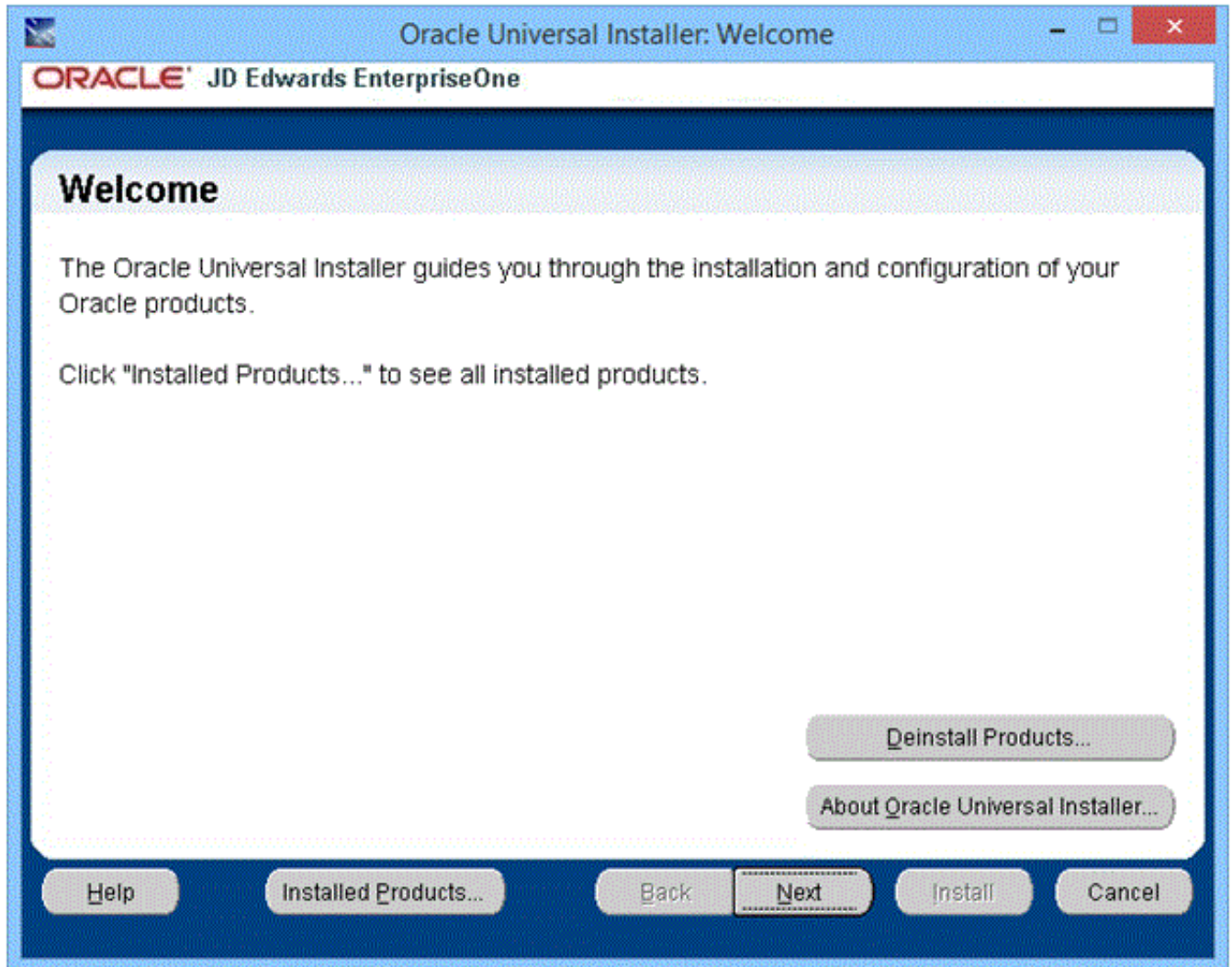
1. Run this program:

```
\\<deployment server name>\<release>\OneWorld Client Install\InstallManager.exe
```

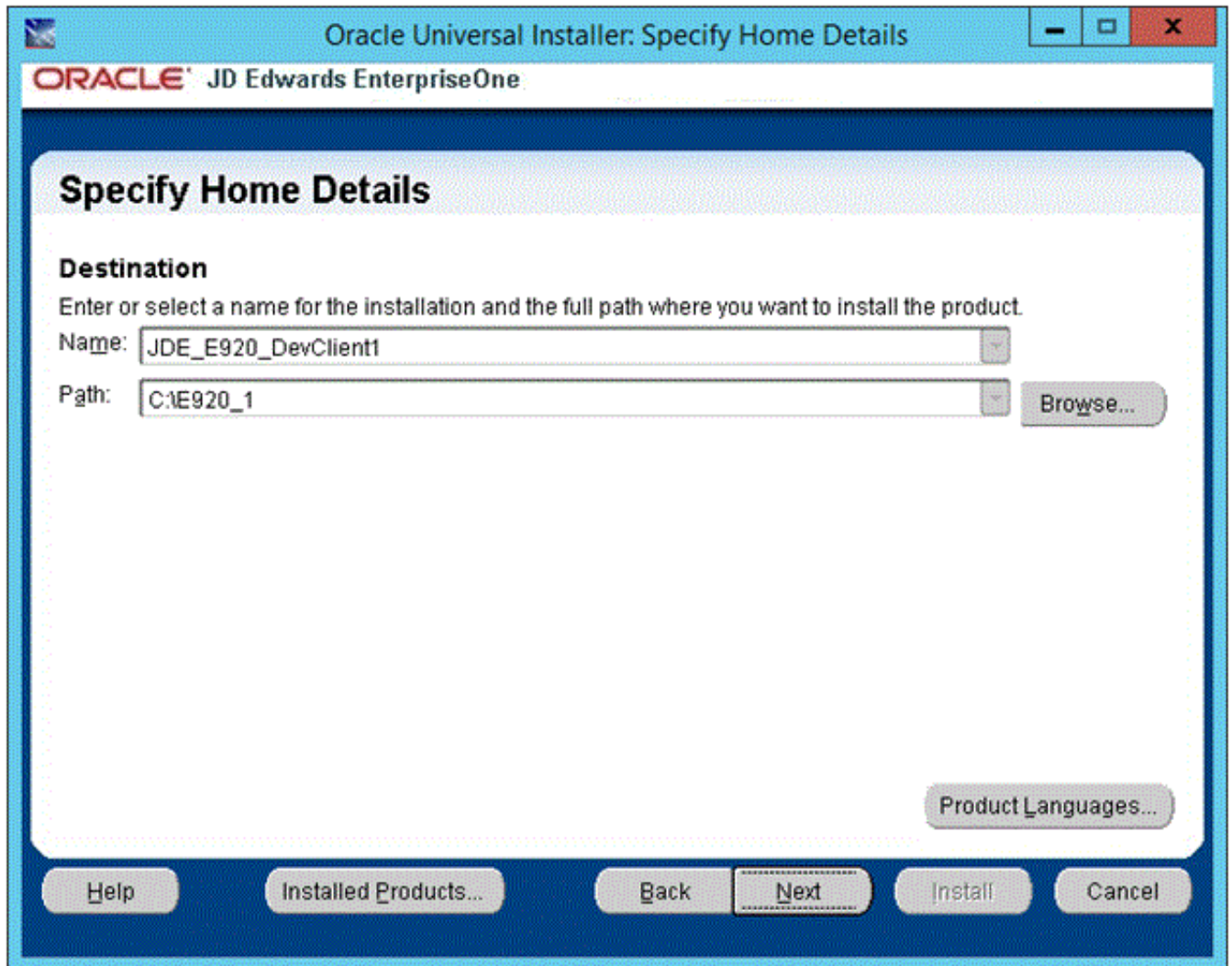

CAUTION: You must right-click on the executable and select **Run as Administrator** from the drop-down. Likewise, if you have a shortcut assigned to `InstallManager.exe`, you must either configure the shortcut to automatically Run as Administrator or right click the shortcut and choose **Run as Administrator**.

2. Click this link to install the JD Edwards EnterpriseOne Development Client:

[EnterpriseOne E920 Client](#)



3. On **Welcome**, click the **Next** button.



4. On **Specify Home Details**, you must specify an **Oracle Home** path and a name for that path.

Each Oracle product that is installed on a machine has what is termed an **Oracle Home** path. This path contains all the files for each Oracle product. This path has a user-specified name as well.

CAUTION: Do not specify the same **Oracle Home** name or path into which you installed a local OEE database.

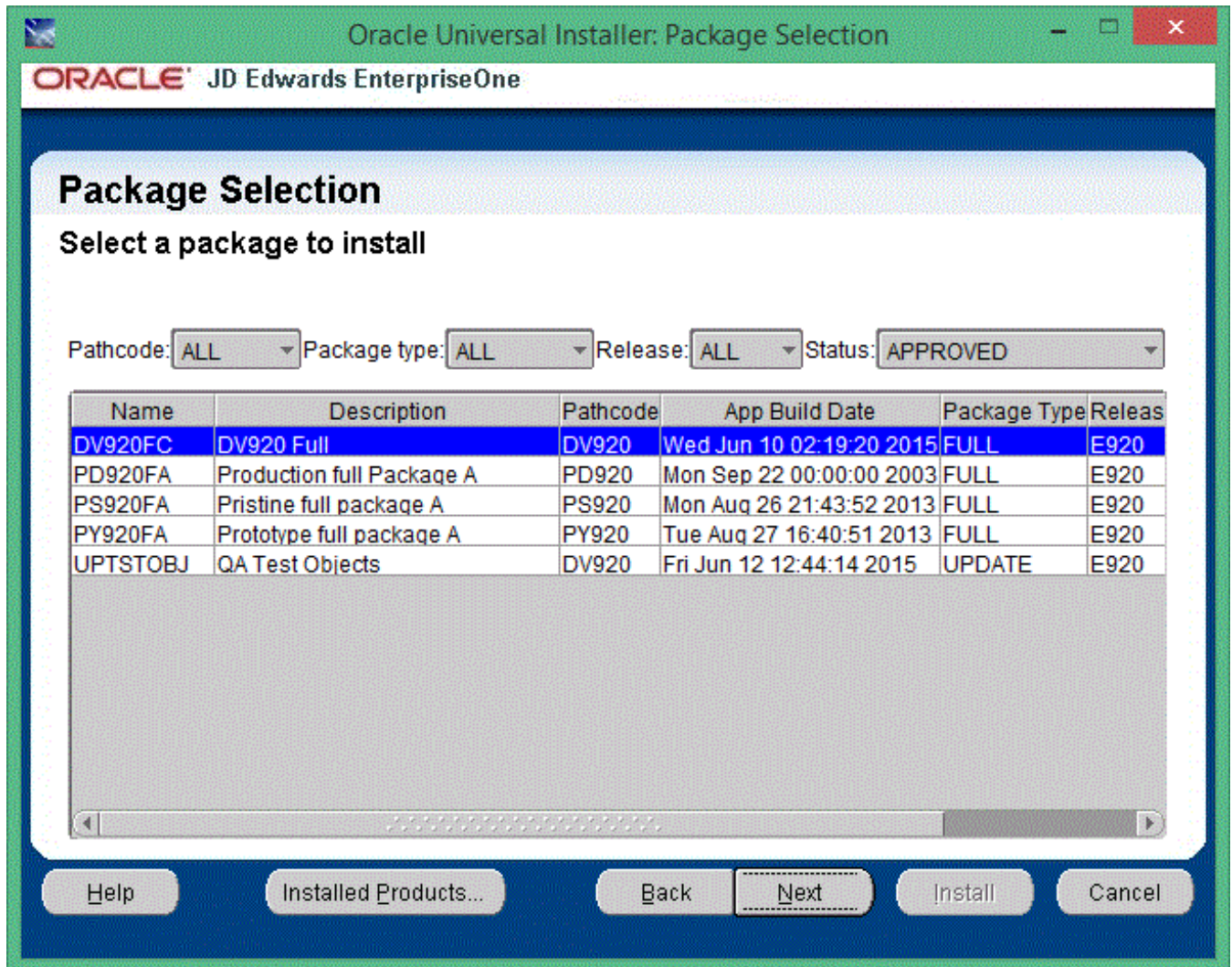
Note: The OUI installer appends a number to the ends of the default Oracle Home name and path. This number is initially "1." If an Oracle Home already exists with the given default name and path, the OUI installer increments this number in both the name and path. You do not have to take the default values; you can enter your own name and path values.

Note: If you have an existing installation of the Development Client and you want to perform another installation on the same machine, you have several options:

- a. Select the same Oracle Home as the existing Development Client.
 - If the package that you select is an update package, the existing Development Client will be updated with files and data from the update package.
 - If the package that you select is a full package and the pathcodes of the package and the existing Development Client are the same, components of the existing Development Client will be removed before the new package is installed.
 - If the package that you select is a full package and the pathcodes of the package and the existing Development Client are NOT the same, the pathcode of the existing Development Client will remain and the new package will be installed giving you multiple pathcodes.
- b. Uninstall the existing Development Client before installing the new one.
- c. Run SnapShot and save the existing Development Client before installing the new one.

Additional information is included in *Installing Multiple Pathcodes*.

5. Click the **Next** button.



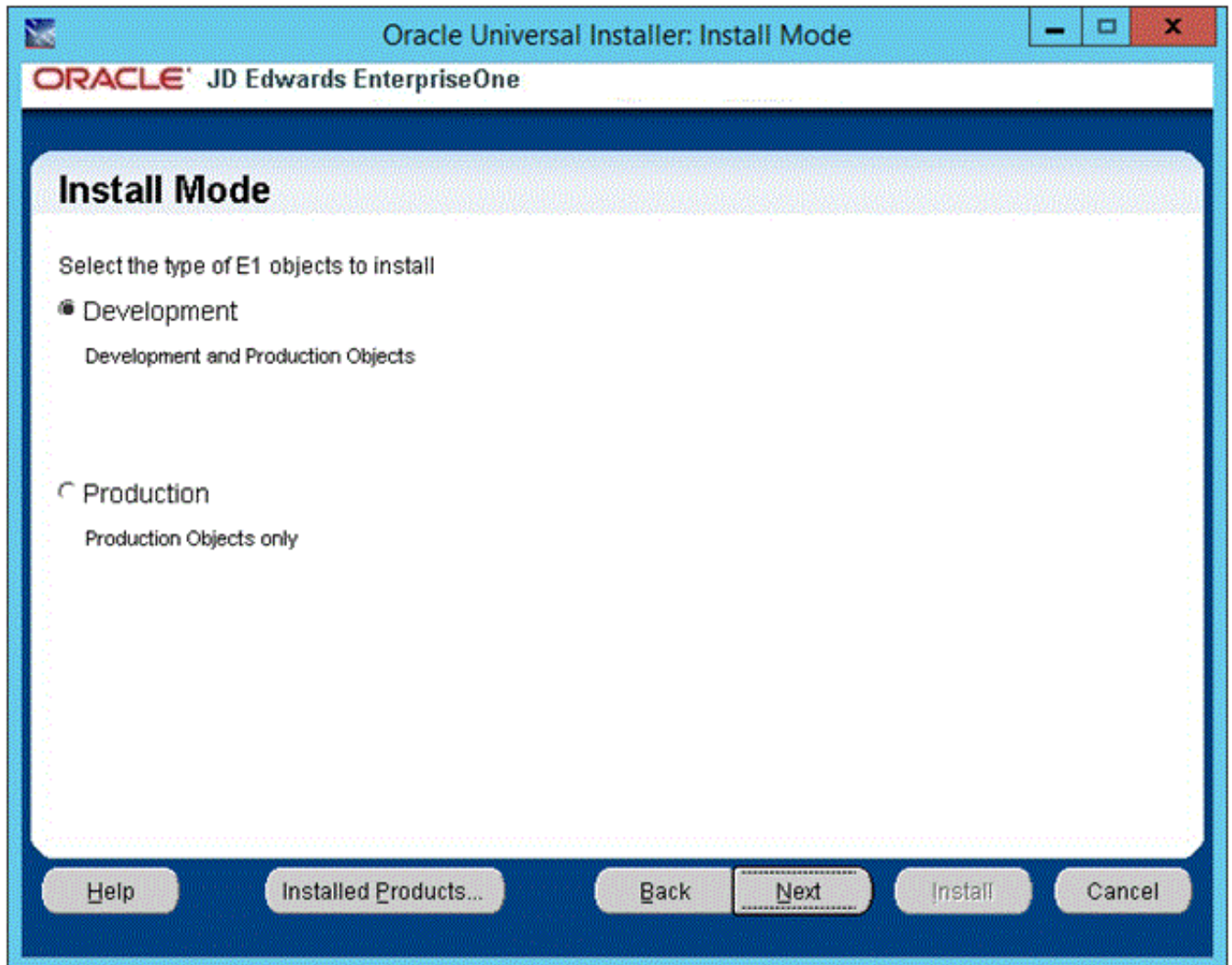
6. On Package Selection, select the appropriate package for the Development Client.

Note: If the Package Selection screen includes multiple Development Client installation packages, for either the Oracle WebLogic Application Server, WebSphere Express, or WebSphere 9.0, be sure to select the package for the application server you are using.

Note: You may filter the list of packages using the combo boxes above the table. You can also sort the list of packages by clicking on a column header.

Note: See *Installing Multiple Pathcodes* for information about installing multiple pathcodes on your workstation.

7. Click the **Next** button.

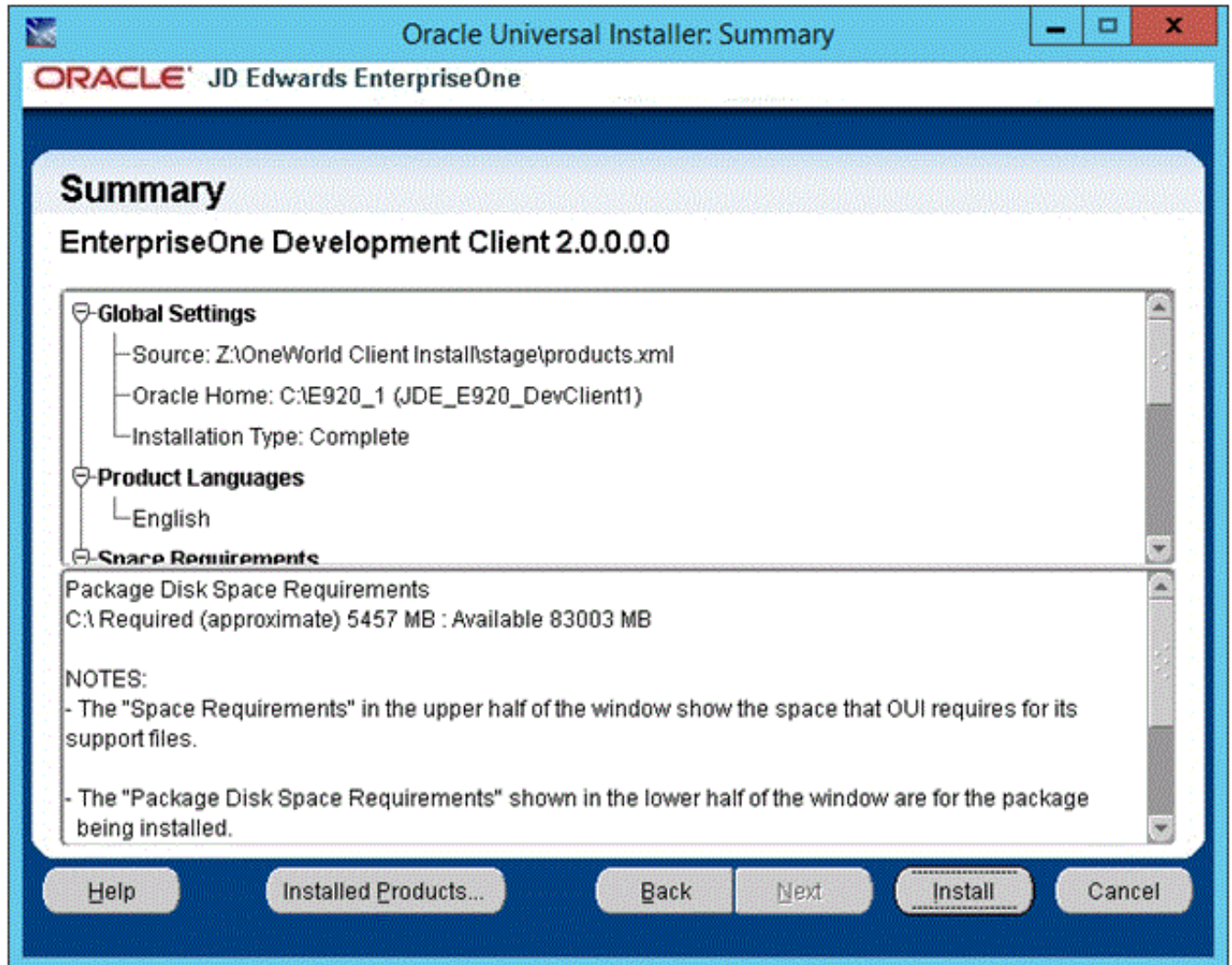


8. On Install Mode, select the type of JD Edwards EnterpriseOne (E1) objects to install:
 - o Development
These are needed if you plan to modify E1 objects such as business functions, applications, forms, etc.
 - o Production
Select this type if you do not plan to modify E1 objects.

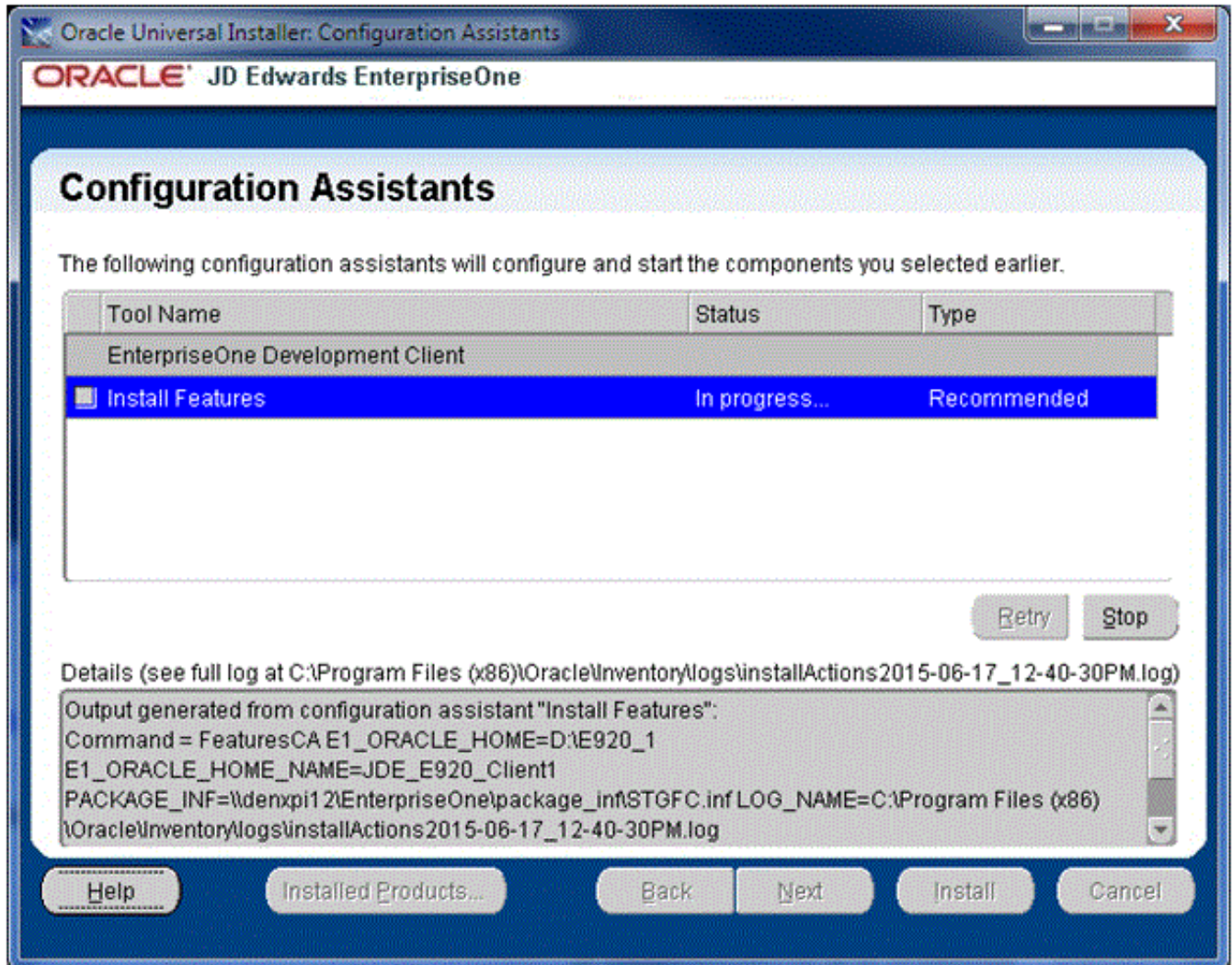
If you selected an update package, you will not see this screen. The install mode will be the same as the already installed full package.

9. Click the **Next** button.

Note: If you selected an update package that includes specs, you will be prompted for an E1 user and password.



10. On Summary, verify that what will be installed is what you expect.
 - o The "Space Requirements" in the upper half of the window show the space that OUI requires for its support files. This space does not include the size of the package that you selected.
 - o The "Package Disk Space Requirements" shown in the lower half of the window are for the package being installed.
 - o If this is an update package or you are installing into an existing Development Client's Oracle Home, the value for the "Package Disk Space Requirements" does not include disk space of the existing installed package. Because some components of the new package may replace existing components or be installed in addition to existing components, the package value may be lower or higher than the actual amount of required disk space.
11. Click the **Install** button.



If the package you are installing contains a Web Client Feature for WLSH4A or WASH4A, the above screen is displayed near the end of the installation. At this point, the Development Client installer spawns additional installers. Which installers are run depends on which features were included in the package that you selected. Those features were specified by the person that created the package.

As the Configuration Assistants spawned installers run, the OUI installer displays the name of the log file at the bottom of the screen in "Details (see full log at ...)". If you do not note the location of the log before the message or screen closes, you can find the installation logs in this directory one of these directories:

- o **64-bit Development Client**

 - C:\Program Files\Oracle\Inventory\logs

- o **32-bit Development Client**

 - C:\Program Files (x86)\Oracle\Inventory\logs

When you display that directory using Windows Explorer, you should sort the contents by date. The results of each installation will be logged in three files, all with the same date_time in their names, but with different file extensions:

- o .log
- o .err
- o .out

For information about the WLSH4A installer, refer to the section of this guide entitled: *Installing the WebLogic Web Client (WLSH4A)*.

Installing the WebLogic Web Client (WLSH4A)

As noted earlier, the WebLogic Web Client (WLSH4A) can be installed as a feature included in the installation package or the WLSH4A installer can be run manually.

If run as a feature, the Development Client installer would have already prompted for the installation location (that is, the Oracle Home path and name). This information is passed to the WLSH4A installer so there will not be a prompt asking again. In this case, the installer will go straight to the Step 4 in the following procedure.

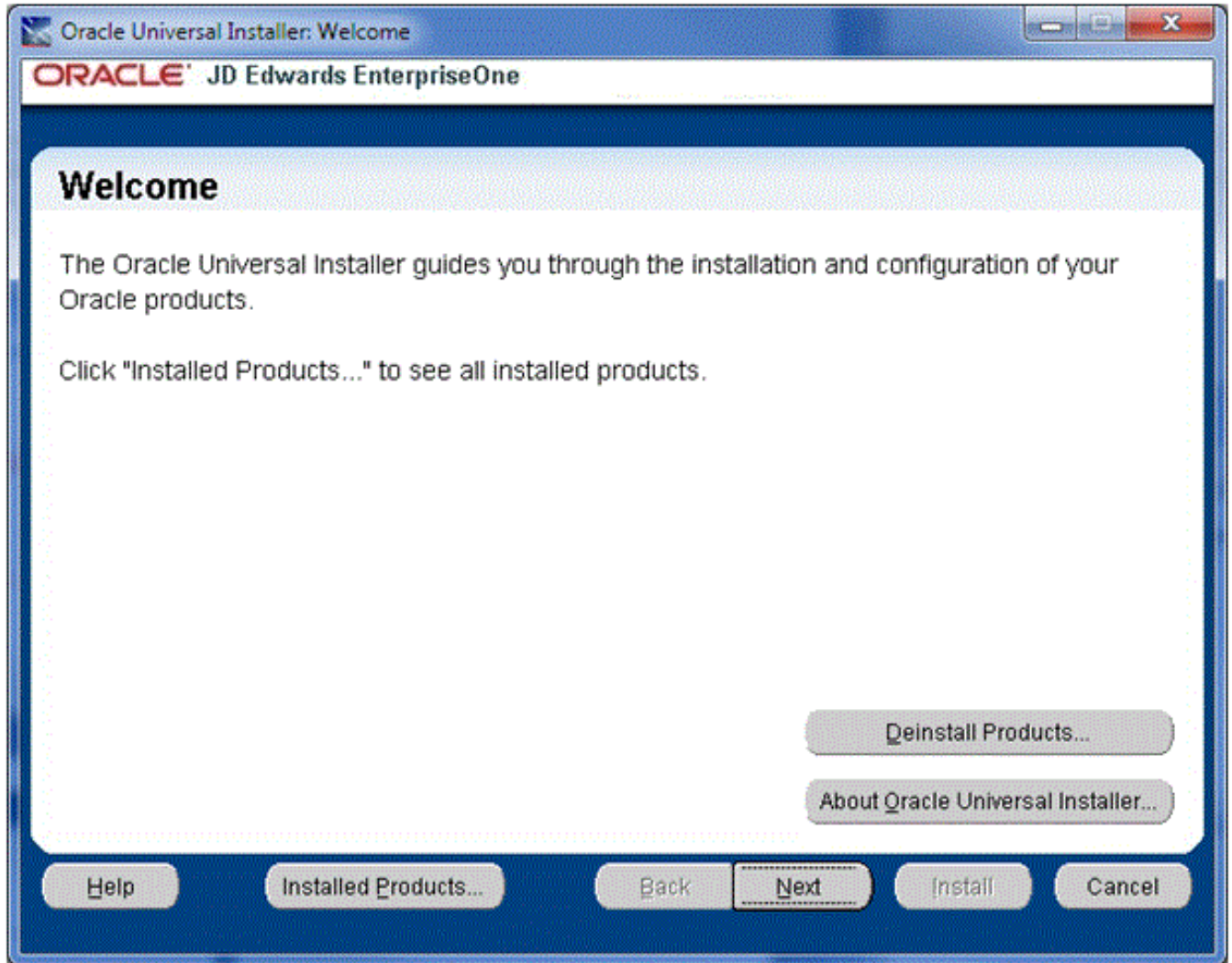
If you run the WLSH4A installer manually, you will need to perform the following steps:

1. Right-click on the following program and select **Run as Administrator**.

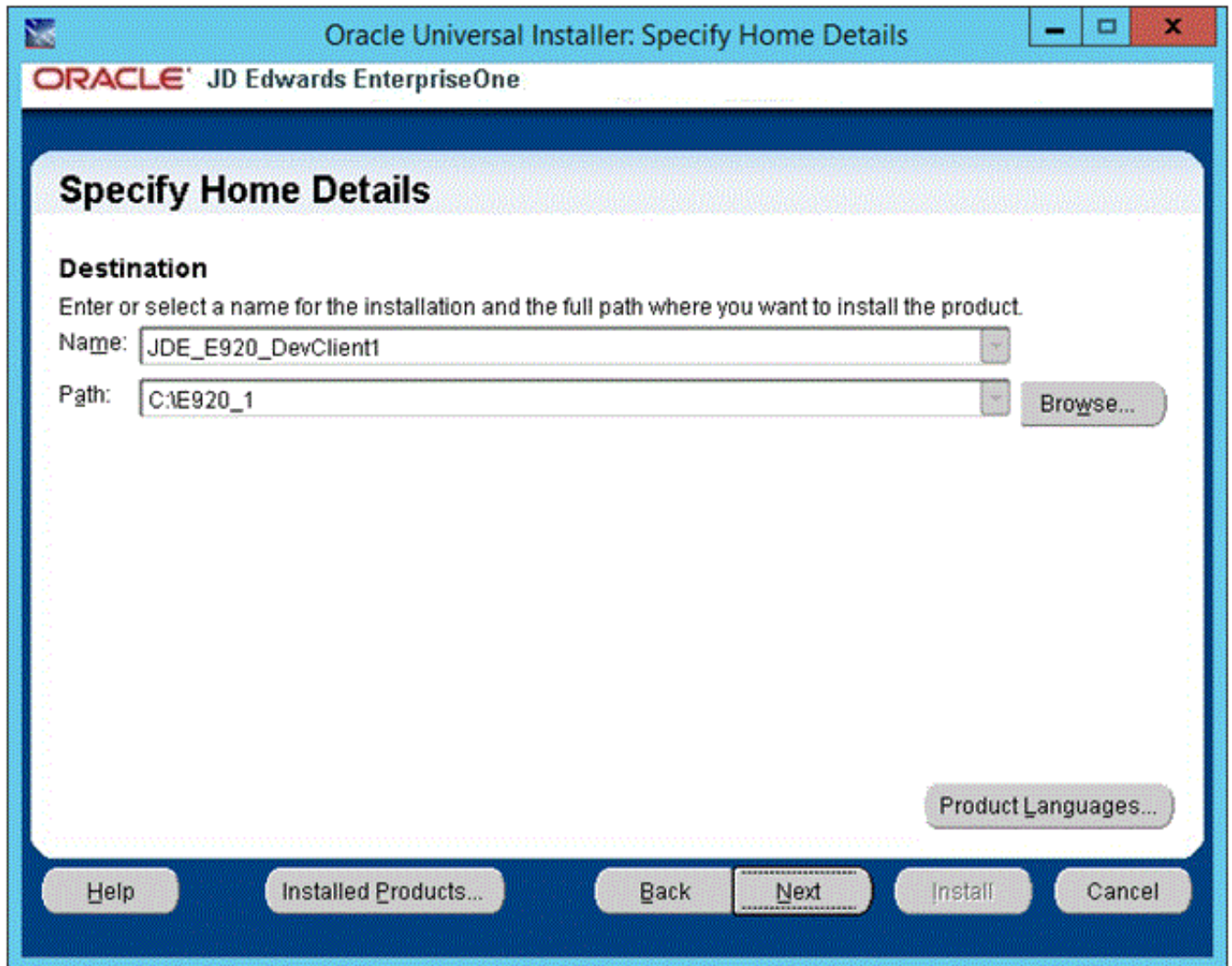
```
\\<deployment server name>\<release>\OneWorld Client Install \ThirdParty\WebDevFeature\WLSH4A\install  
\setup.exe
```

CAUTION: For Microsoft Windows, you must right-click on the executable and select **Run as Administrator** from the drop-down.

Note: If the Deployment Server is using multifoundation, the path of the installer program will be something like: \\<deployment server name>\<release>\foundation_<xxx>\OneWorld Client Install \ThirdParty
\WebDevFeature\WLSH4A\install\setup.exe



2. On Welcome, click the **Next** button.



3. On Specify Home Details, click either one of the drop downs and select the same name or path as the Development Client. When you select a path or name from one of the drop downs, the corresponding name or path will automatically be displayed in the other field.

CAUTION: It is imperative that you select the Oracle Home Name and Path where the Development Client is installed. If you do not do this, the installation will fail or the resulting installation will not be runnable.

The screenshot shows a window titled "Oracle Universal Installer: WebLogic Admin Server Information". The window has a blue header with the Oracle logo and "JD Edwards EnterpriseOne". Below the header, the title "WebLogic Admin Server Information" is displayed. The main area contains the instruction "Enter the WebLogic Server information listed below." followed by five input fields: "Admin User Name:" (containing "weblogic"), "Admin User Password:", "Confirm Password:", "Admin Server Port:" (containing "9201"), and "Managed Server (E1) Port:" (containing "9200"). At the bottom, there is a note: "NOTE: Leading and trailing spaces will be removed from the user name and password fields." and a row of buttons: "Help", "Installed Products...", "Back", "Next", "Install", and "Cancel".

4. On WebLogic Admin Server Information, you are prompted for information that is necessary to access and configure the local WebLogic Server, which is already installed on the Development Client. Using these credentials the WLSH4A installer is able to create and configure a WebLogic Admin user and domain.

Note:

If WLSH4A was installed previously, enter the same Admin User Password as was entered during the previous installation. If you do not know that password, you need to reinstall WebLogic Server.

If you have multiple WebLogic Servers installed, you will be prompted for the one to use. In that case, enter the same Admin User Password for the WebLogic Server that you choose.

If this is the first time that WLSH4A was installed on a particular WebLogic Server, you can enter any password that meets the password security policy for WebLogic (see below for more information).

Note: The Admin user is required by the WLSH4A installer during the installation. Although not normally needed by users on the Development Client, you may need to sign into the WebLogic Server Administrative Console (for example, to perform administrative tasks). In that case, you will need to provide this same Admin user and its password when signing in. Therefore you should record or remember these Admin user and password credentials.

Complete these fields:

- o *Admin User Name*

Enter the name of the WebLogic administrative user account to be created.

The value you enter here can be any value that contains valid characters as allowed by the WebLogic application server.

- o *Admin User Password:*

Enter the password for the WebLogic administrative user account to be created.

This password must meet the password security policy for WebLogic.

Tip: Password Complexity Policy. The Password Validation provider in WebLogic determines the password complexity policy for the WebLogic Admin user. The default policy requires that the password be a minimum of 8 characters. The OUI installer cannot programmatically determine and return these policy requirements. Therefore, it is beyond the scope of this documentation to guide the end user to determine the exact policy requirements for user names and their associated passwords. If the password you enter here does not meet the WebLogic password policy on your machine the WLSH4A installer will fail later in the installation process. To recover, you must determine a valid value for your WebLogic Server and re-run the WLSH4A installer and enter a valid password.

- o *Confirm Password*

Re-enter the password to confirm it.

- *Admin Server Port*

Enter the port number for the WebLogic Server Administrative Console. In most cases you can accept the value that defaults into this field. You should not change this value unless you understand the impact of doing so.

- *Managed Server (E1Server) Port*

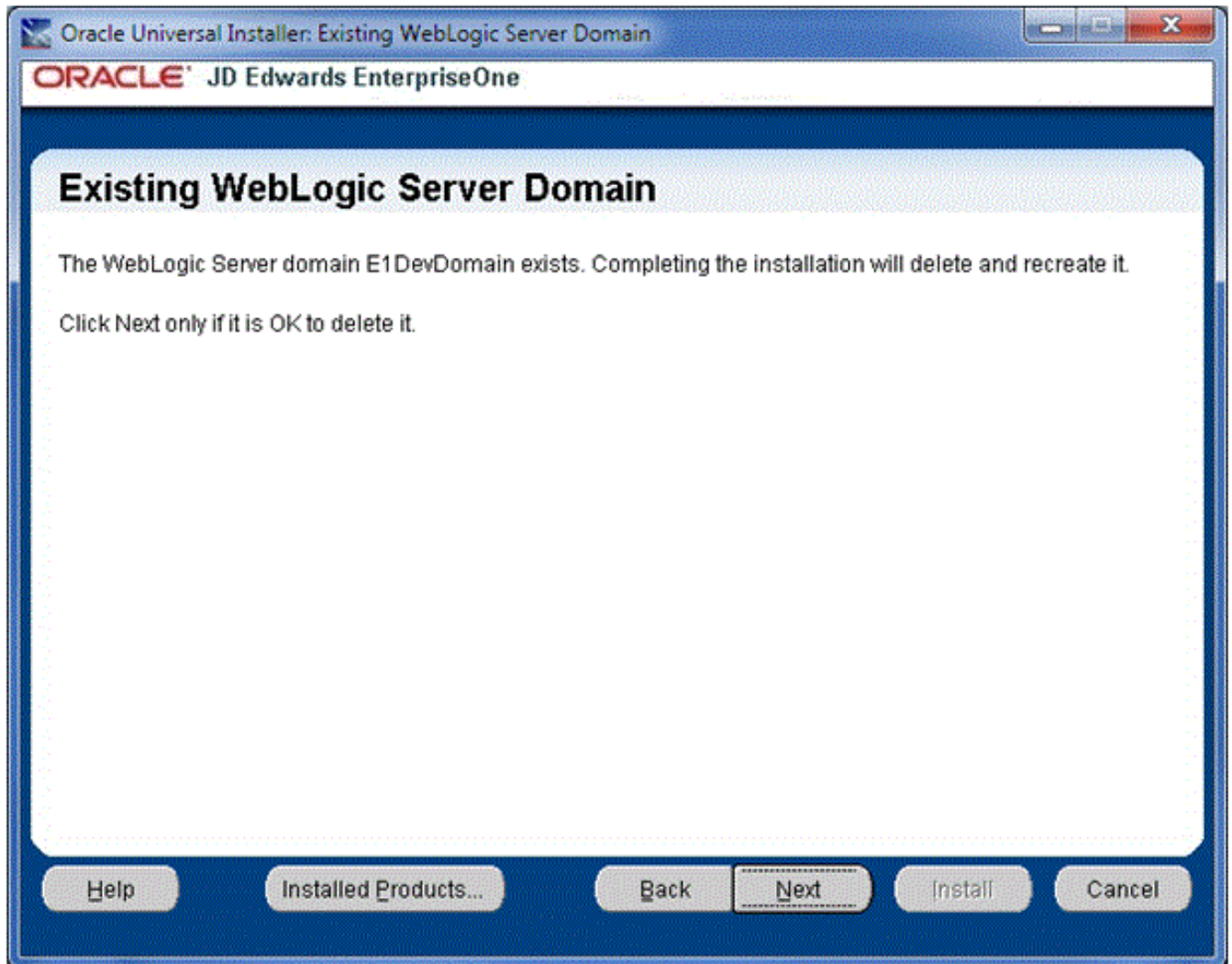
Enter the port number for the instance of the JD Edwards EnterpriseOne server (called E1Server) that is created on WebLogic. This server is a scaled-down JD Edwards EnterpriseOne HTML Server that is used by the Development Client to service the web client.

5. Click the **Next** button.

6. If the package you are installing contains the WLSH4A Web Dev Feature, you will see the above screen.

This information is required to access and configure the local WebLogic Server that is already installed on the Development Client. Using these credentials, the WLSH4A installer will be able to create and configure a WebLogic Admin user and domain. If the Admin user and the Admin domain already exists, the installer will delete them and recreate them using the values you enter on this screen.

7. Click the **Next** button.

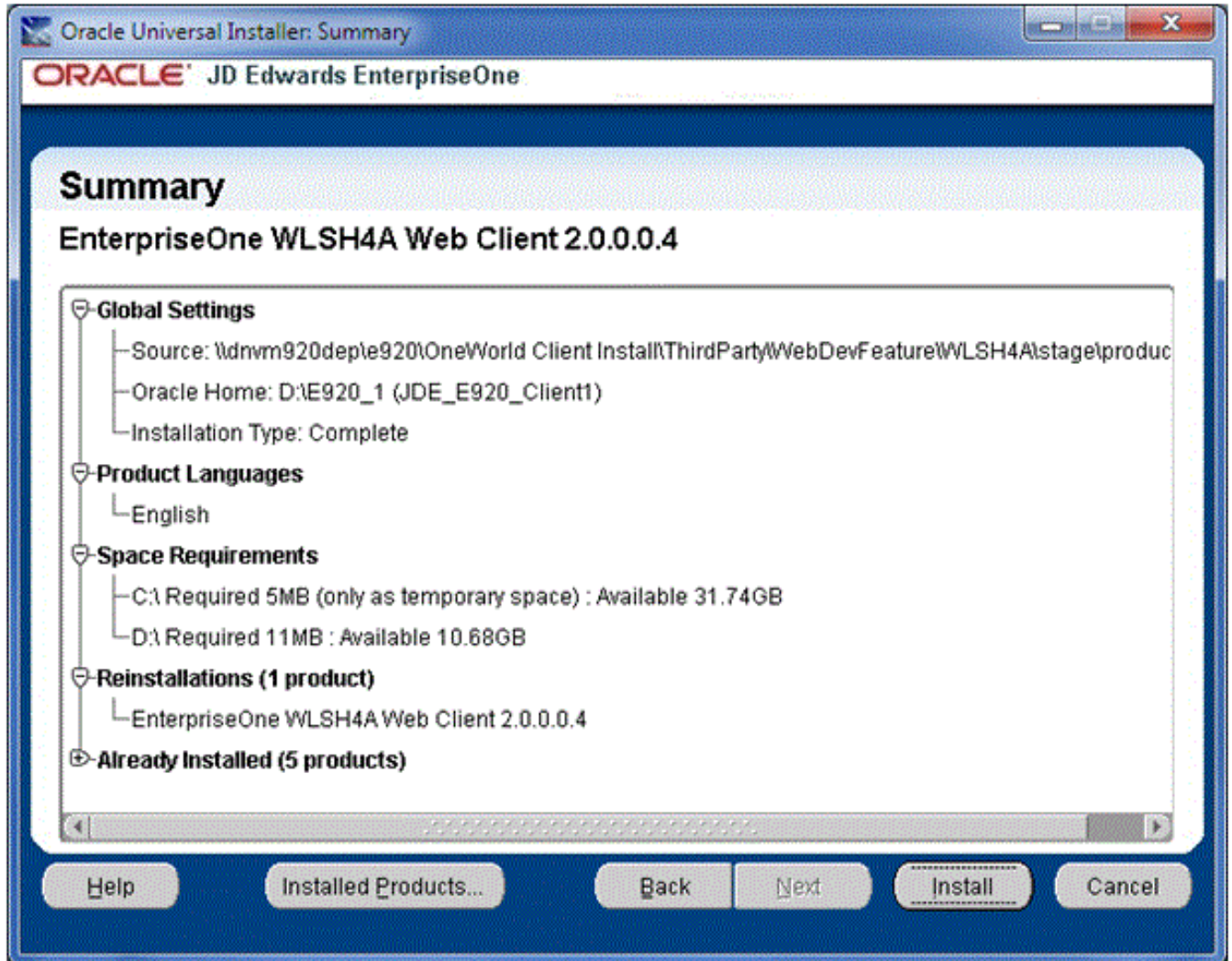


8. If the installer detects an existing WLSH4A configuration, it displays the above screen informing you that the existing configuration will be deleted before the new configuration is created.

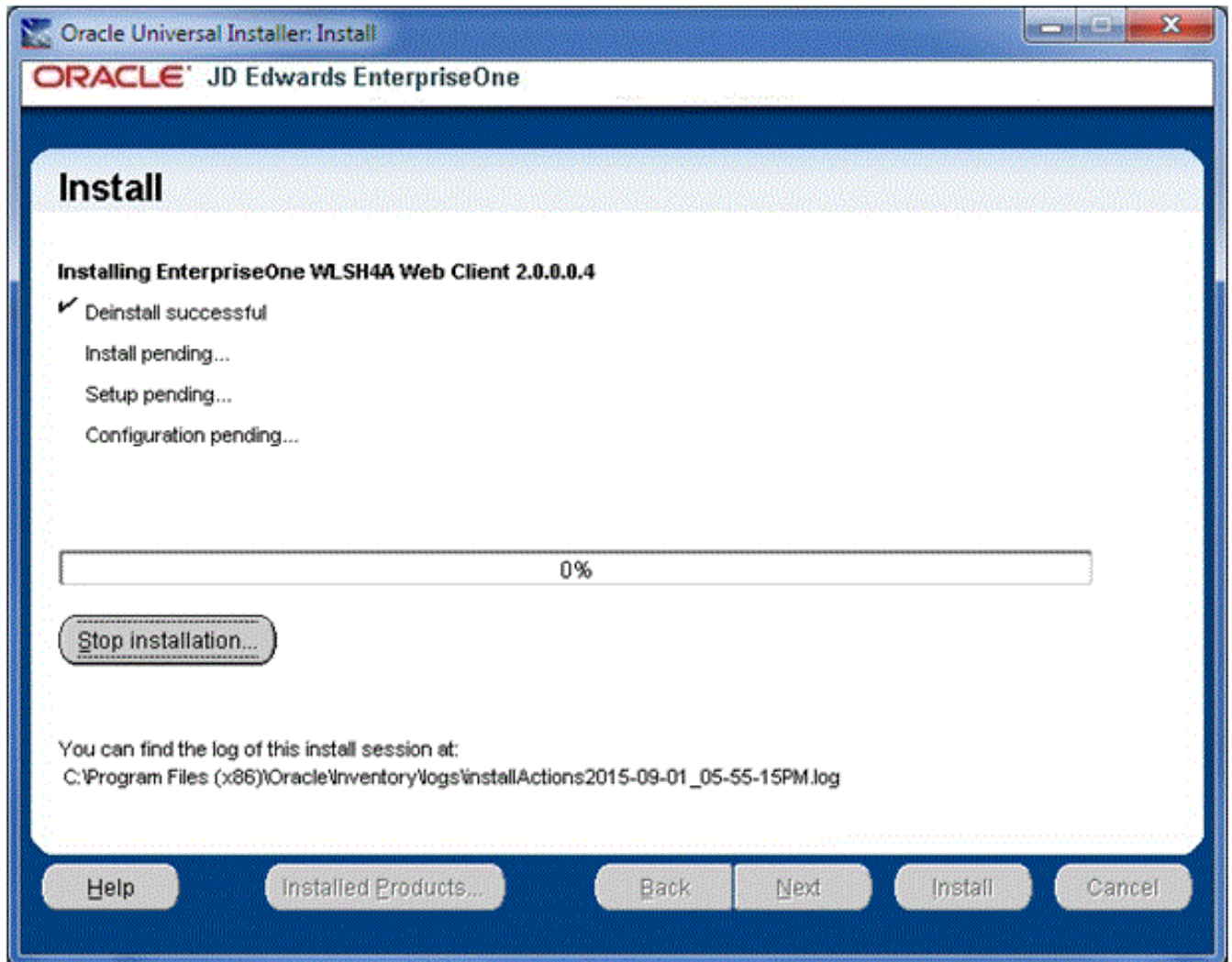
CAUTION: In the unlikely case that you have data in that location that you want to save, you should do so before you proceed. The directories to save are:

- `<WebLogic_install_dir>\user_projects\domains\E1DevDomain`
- `<E1_install_dir>\system\JAS\EA_JAS_80.ear`

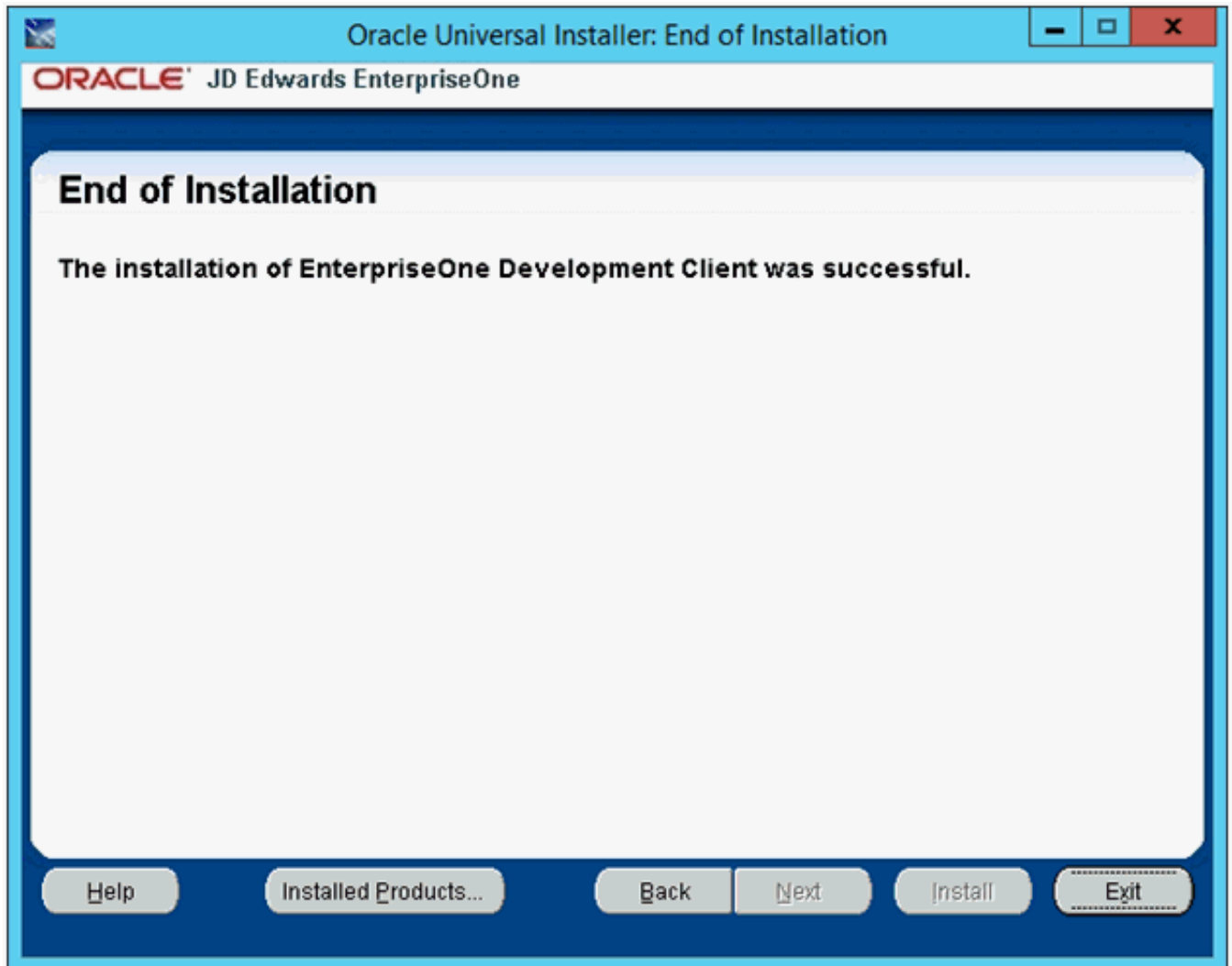
Note: Multiple WebLogic Servers. It is possible for your machine to have multiple installations of WebLogic Server (perhaps because they are different versions). If so, the WLSH4A installer will prompt you to specify which version you want to use for this installation. Select the one that you want and click the **Next** button to proceed.



9. On Summary, click the **Install** button.

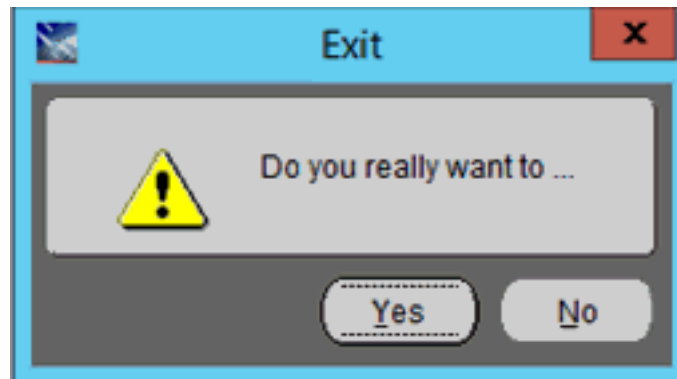


10. The installer displays a progress screen.



11. If running as a feature in a package, you will see the End of Installation screen. Click the **Exit** button to complete the Development Client installation and return to the OUI installer.

Otherwise, if you are running the WLSH4A installer manually, you will not see the End of Installation screen.



12. On the Exit dialog, click the **Yes** button to exit the OUI installer.

If you encounter errors during the installation process, refer to these troubleshooting chapters in this guide:

- [Troubleshooting the Installation Process](#)
- [Troubleshooting the Workstation](#)

Installing the Development Client with a Package Including the WebSphere (WASH4A) Feature

Even though the WebSphere Express, WebSphere for Developers, or WebSphere 9.0 Web Client (WASH4A) can be installed manually, the recommended method is to install it as a package feature as described in this section.

CAUTION: For a package that includes an WASH4A Web Client, be aware that the installers for IBM WebSphere Express, IBM WebSphere for Developers, and WebSphere 9.0 place data into the registry specifically for the Microsoft Windows user that is signed into Microsoft Windows at the time of installation. You must sign into Microsoft Windows using this same user when you install and run the JD Edwards EnterpriseOne Development and Web Clients.

CAUTION: For WebSphere Application Server 9 (9.0.0.0 to 9.0.0.2 only) version, before installing WASH4A, you must perform this prerequisite procedure:

1. Run `regedit.exe` to edit the Windows Registry.
2. Back up Windows Registry. For example, you could use File > Export registry.
3. In the Windows Registry, rename this entry **from 8.5.0.0 to 9.0.0.0** by right clicking and choosing **Rename**:

```
HKEY_CURRENT_USER\SOFTWARE\WebSphere Application Server\8.5.0.0
```

4. Highlight and right click the 9.0.0.0 directory, choose **MajorVersion** name, and click **Modify...**
5. Update the **Value data** field from 8 to 9.
6. Close the Windows Registry window and restart the system.

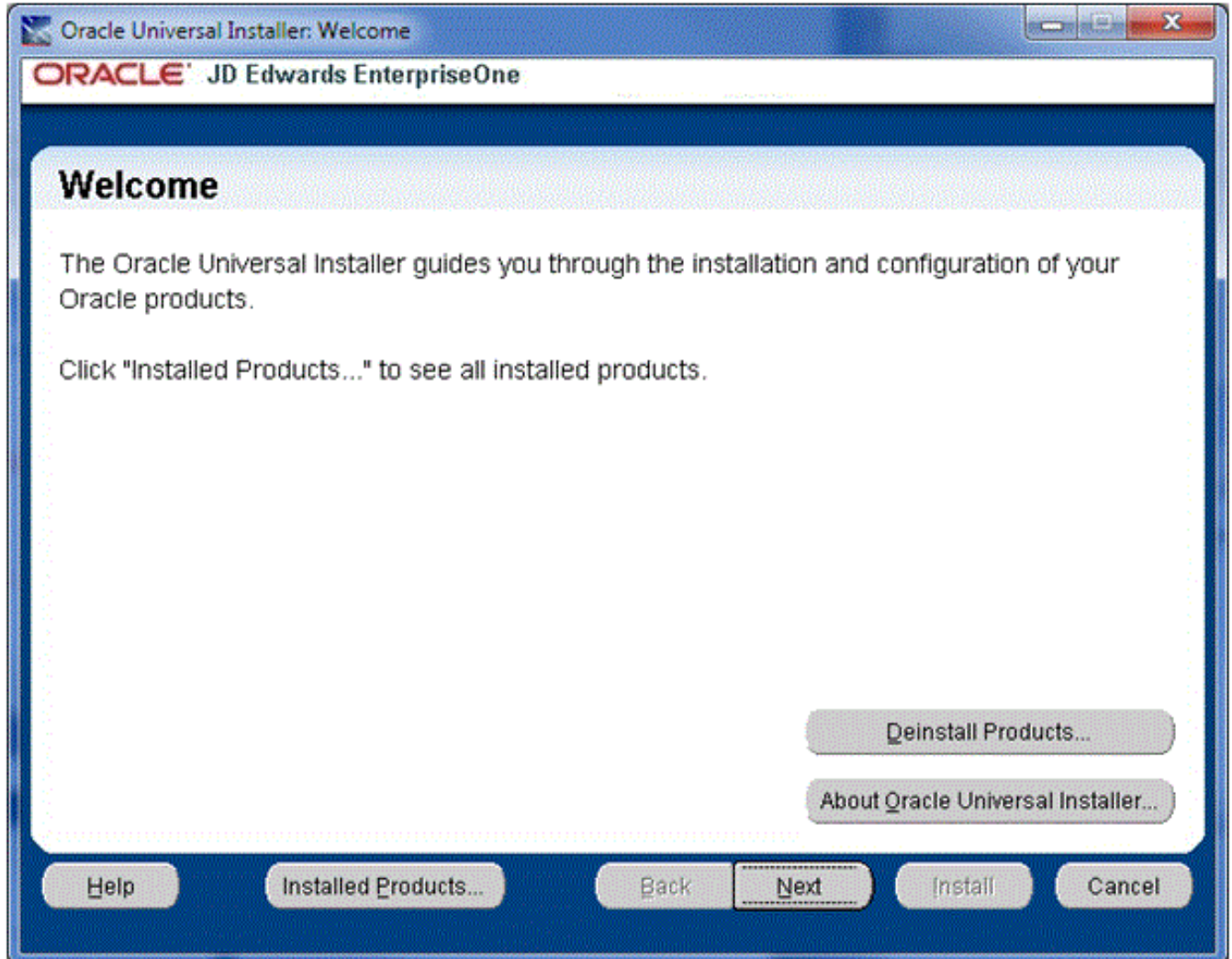
Note: If you run the Development Client installer that includes the installation of a package for the WASH4A Web Client and the corresponding version of WebSphere Express, Developers is not installed, the installer displays an error during the installation of the web component. The standard Microsoft Windows components of the Development Client will install and function normally, but you will not be able to run the Web Client.

Perform these steps to install the WebSphere Express, WebSphere for Developers, or WebSphere 9.0 Web Client (WASH4A):

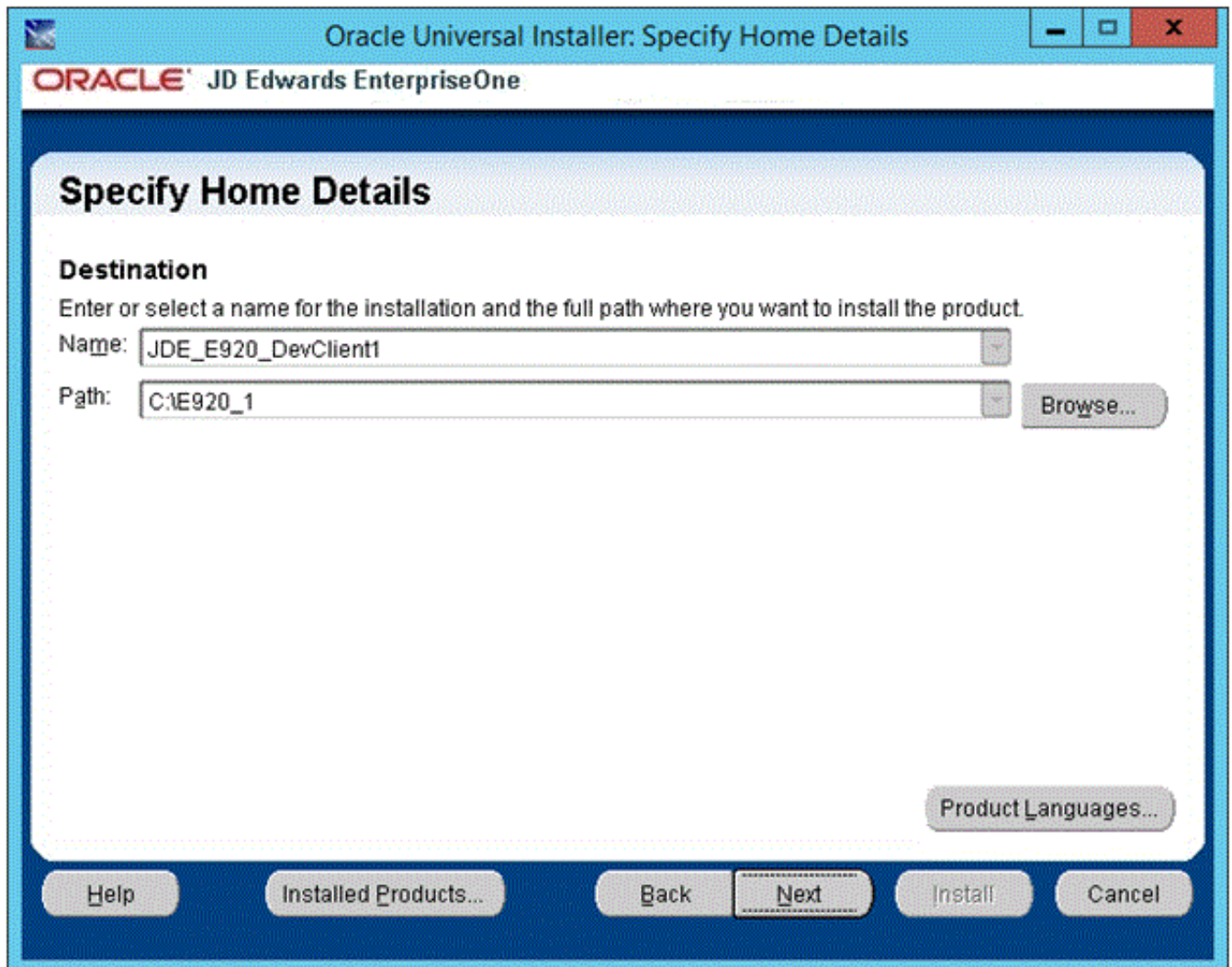
1. Right-click on the following program and select **Run as Administrator**.

```
\\<deployment server name>\<release>\OneWorld Client Install \ThirdParty\WebDevFeature\WASH4A\install  
\setup.exe
```

CAUTION: For Microsoft Windows, you must right-click on the executable and select **Run as Administrator** from the drop-down.



2. On Welcome, click the **Next** button.

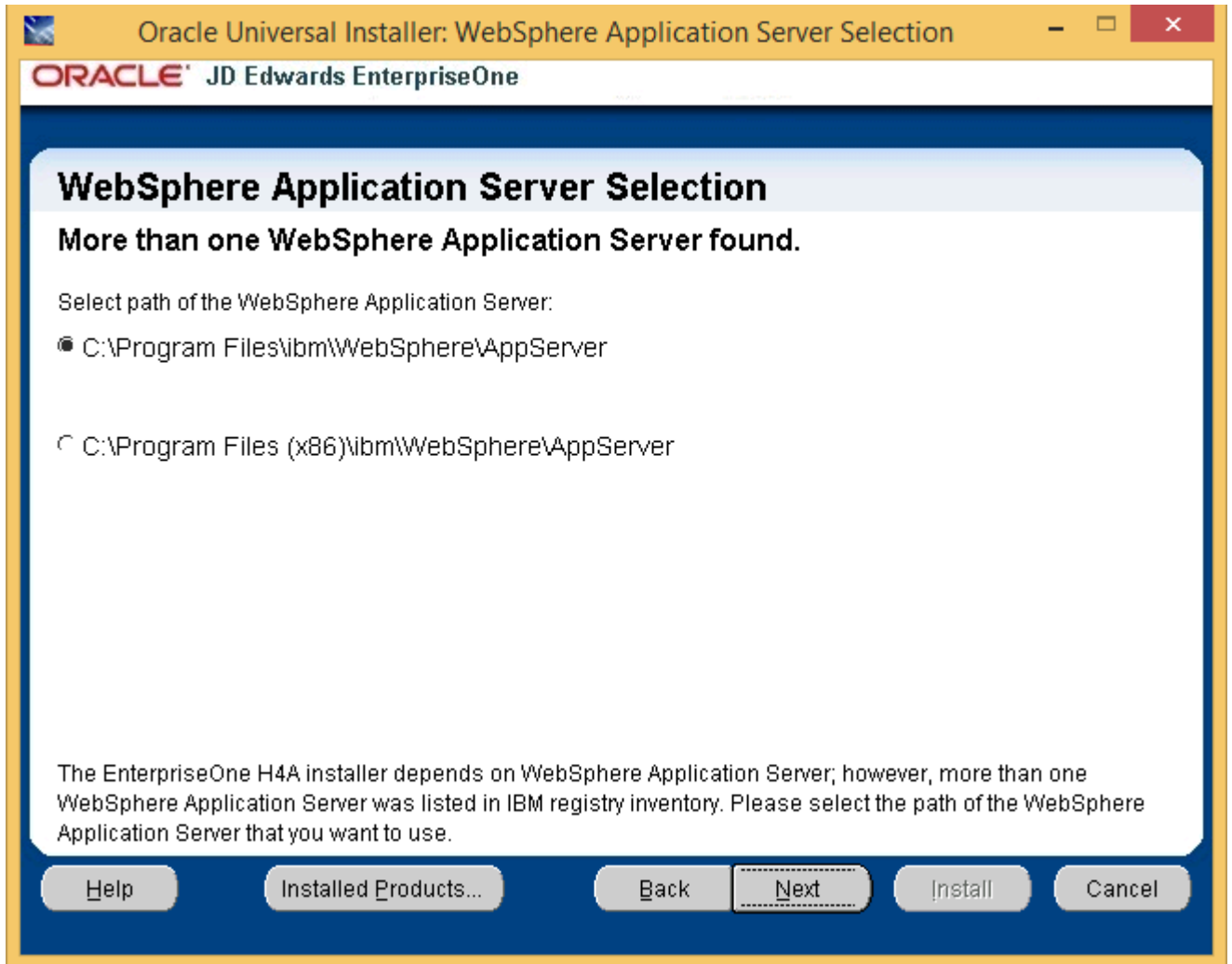


3. On Specify Home Details, click either one of the drop downs and select the same name or path as the Development Client. When you select a path or name from one of the drop downs, the corresponding name or path will automatically be displayed in the other field.

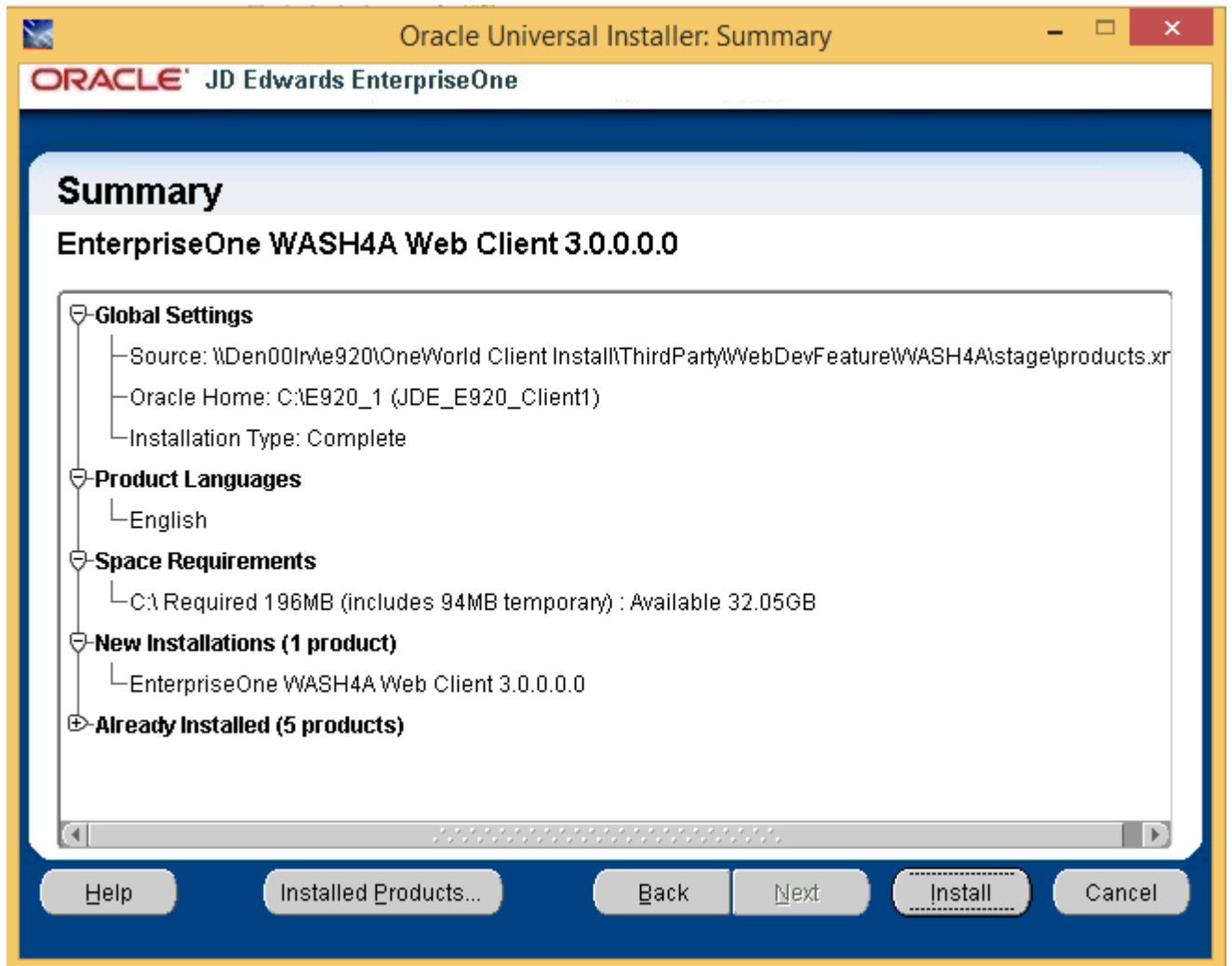
CAUTION: It is imperative that you select the Oracle Home Name and Path where the Development Client is installed. If you do not do this, the installation will fail or the resulting installation will not be runnable.

4. Click the **Next** button.

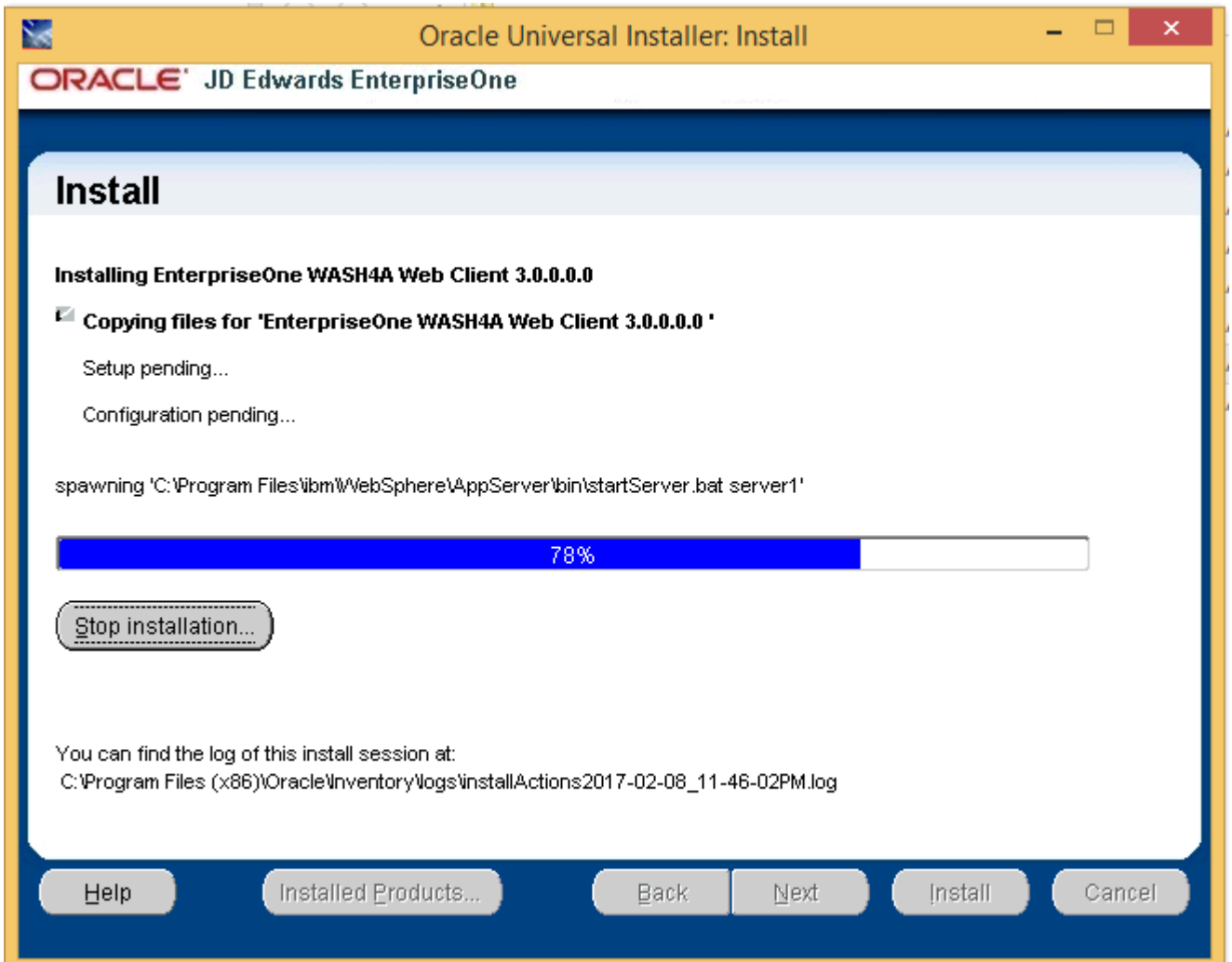
5. If multiple WebSphere Application Servers are installed, you will see the window entitled: **WebSphere Application Server Selection**. You should verify the radio button is selected that corresponds to the WebSphere Application Server path that the Development Client should use. By default, the system selects the highest version. You can change the version if required.



6. Click the **Next** button.

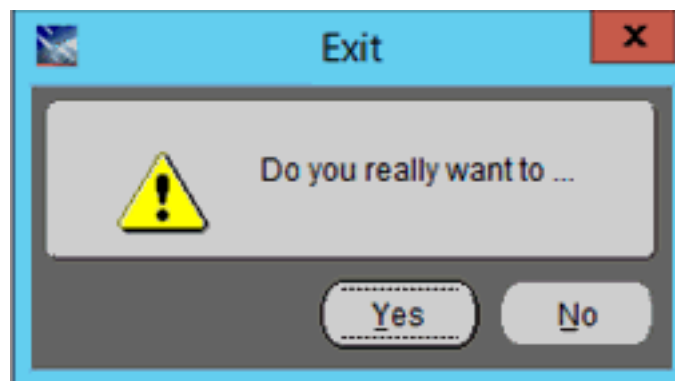


7. On Summary, click the **Install** button.



8. The installer displays a progress screen.
9. If running as a feature in a package, you will see the End of Installation screen. Click the **Exit** button to complete the Development Client installation and return to the OUI installer.

Otherwise, if you are running the WASH4A installer manually, you will not see the End of Installation screen.



10. On the Exit dialog, click the **Yes** button to exit the OUI installer.

If you encounter errors during the installation process, refer to these troubleshooting chapters in this guide:

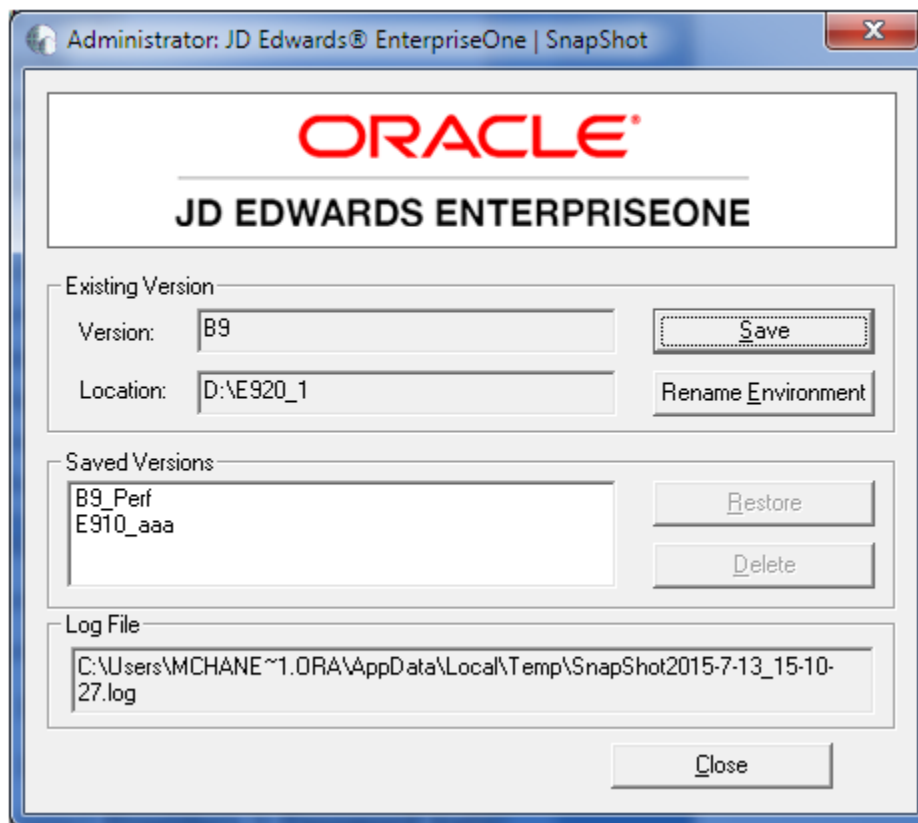
- *Troubleshooting the Installation Process*
- Troubleshooting the Workstation

10 Working With SnapShot on the Development Client

Understanding SnapShot

The SnapShot program (note the terminology uses upper case S's in the naming convention for this program) manages multiple instances of the JD Edwards EnterpriseOne Development Client on a single machine. Using this program you can save and restore copies of an installed Development Client. A saved copy is called a "snapshot" (note the terminology uses lower case s's in the naming convention for this entity).

Below is an example of SnapShot managing multiple tools releases including E920 and two installations of E910 (B9_Perf and E910_aaa).



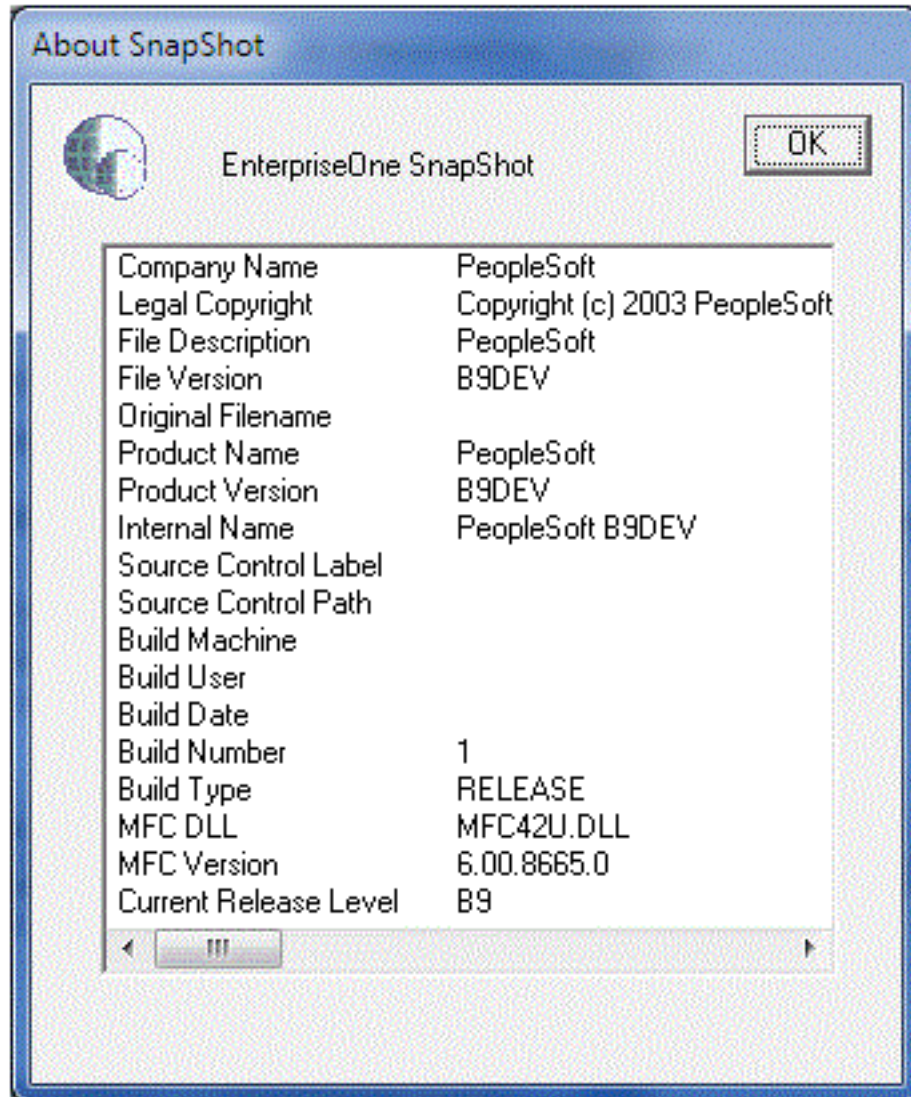
The preceding image shows the JD Edwards main SnapShot window. The main features of this window, from top to bottom, include:

- *Close (icon)*

The Close icon is located in the upper right hand corner. Click this icon to exit `snapShot.exe`.

- *System (icon)*

The System icon is located in the upper left hand corner. Click on this icon or right-click on the title bar to display a drop-down menu that contains "About EnterpriseOne SnapShot...." Selecting this item displays version and build information about SnapShot as shown below:



- *Existing Version*

This area contains these fields and buttons:

- *Version*

Lists the existing installed Development Client . Initially, this is the release specified in the installed package. After you save and then restore a SnapShot, this field will be the name that you gave the SnapShot when you saved it.

- *Location*

The JD Edwards EnterpriseOne installation directory.

- *Save Button*

Saves the installed JD Edwards EnterpriseOne to a snapshot.

- *Rename Environment Button*

Renames the path code and environment names of the installed JD Edwards EnterpriseOne. This function is not available on the Deployment Server.

- *Saved Versions*

This area contains a field that lists saved versions (also called snapshots). The example in this image shows the following versions: B9_Perf and E910_aaa.

- *Restore Button*

Restores a saved version (snapshot) to a runnable JD Edwards EnterpriseOne installation.

- *Delete Button*

Removes a saved version (snapshot).

- *Log File*

Displays the log file path and name.

- *Close Button*

Exits the `snapShot.exe` program.

Prerequisites

Before saving or restoring a JD Edwards EnterpriseOne installation using SnapShot, be sure that:

- You are signed into Microsoft Windows using an account with sufficient privileges (for example: read, write, execute) to the registry and to the JD Edwards EnterpriseOne installation and saved directories.
- All JD Edwards EnterpriseOne programs are closed.
- No applications (for example, Windows Explorer) have a file or subfolder open in either the installation or the saved directory or one of their subdirectories.
- The `snapShot.exe` that you are running is not in either the installation or the saved directory or one of their subdirectories.

- The database(s) that both the JD Edwards EnterpriseOne installation and the saved snapshot use is installed and running.
- Ensure that the Oracle product JDeveloper is not running.

Additional considerations:

- Before installing a new Development Client into a new Oracle Home, make sure you do not have any previous versions in the **Existing Version** field of SnapShot. All versions must be saved and should appear in the **Saved Versions** field.

Using SnapShot on the Development Client

To use SnapShot with multiple releases of the JD Edwards EnterpriseOne applications, you must use the most current version of SnapShot when switching between different releases of JD Edwards EnterpriseOne. For example, if you install the foundation code for both JD Edwards EnterpriseOne Applications *Release 9.2* and Applications Release 8.12, you must use the version of SnapShot corresponding to the most current JD Edwards EnterpriseOne tools release, in this case, *Tools Release 9.2*.

This section describes these tasks:

- *Starting SnapShot*
- *Saving a Snapshot*
- *Restoring a Snapshot*
- *Deleting a Snapshot*

Starting SnapShot

CAUTION: Be sure to follow the guidelines in the preceding sections of this guide entitled:

- *Microsoft Windows Security*

As noted in this section, you do not have to right click on the `Snapshot.exe` icon and select **Run as administrator**. This is because `Snapshot.exe` is designed to automatically attempt to start with the elevated permissions. If you are not signed into Windows with an administrative account, you will be prompted to enter the credentials for an administrative account.

- *Minimizing Locked Files*

The SnapShot utility is delivered with the installation of the JD Edwards EnterpriseOne Development Client. It is located in this directory:

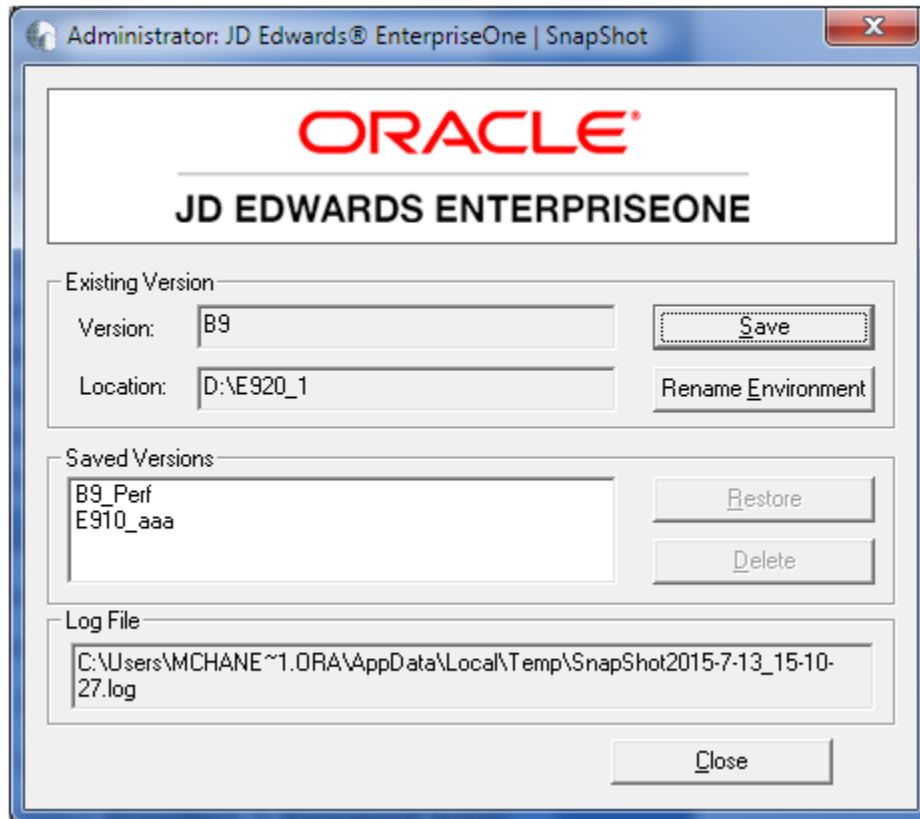
```
<dev_client_installation_directory>\System\Bin32
```

To run the most current version of SnapShot for multiple releases, you must copy the `Snapshot.exe` program to a directory outside the Development Client installation directory. For example, the installation directory might be `c:\E920`. If you attempt to run SnapShot from within the Development Client installation directory (for example, `c:\E920`), SnapShot will fail to rename the installation directory.

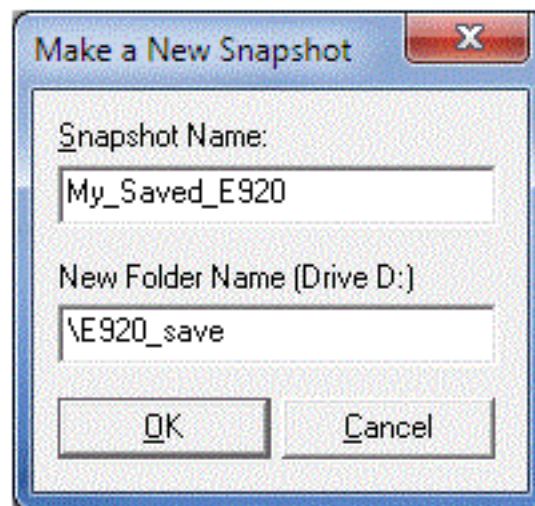
Tip: You can create a shortcut to `snapShot.exe`, but you still must copy `snapShot.exe` to a location outside the original installation directory where it was delivered.

Saving a Snapshot

To save a snapshot:



1. On the main SnapShot window, click the Save button.



2. On Make a New Snapshot, complete this field:

- *Snapshot Name*

Enter a name for the snapshot that will be saved. You may choose any name with the exceptions that the name cannot be empty and it cannot contain a backslash ('\ '). A recommended scheme is to make it release specific, for example, Xe, B9, or E920.

- *New Folder Name*

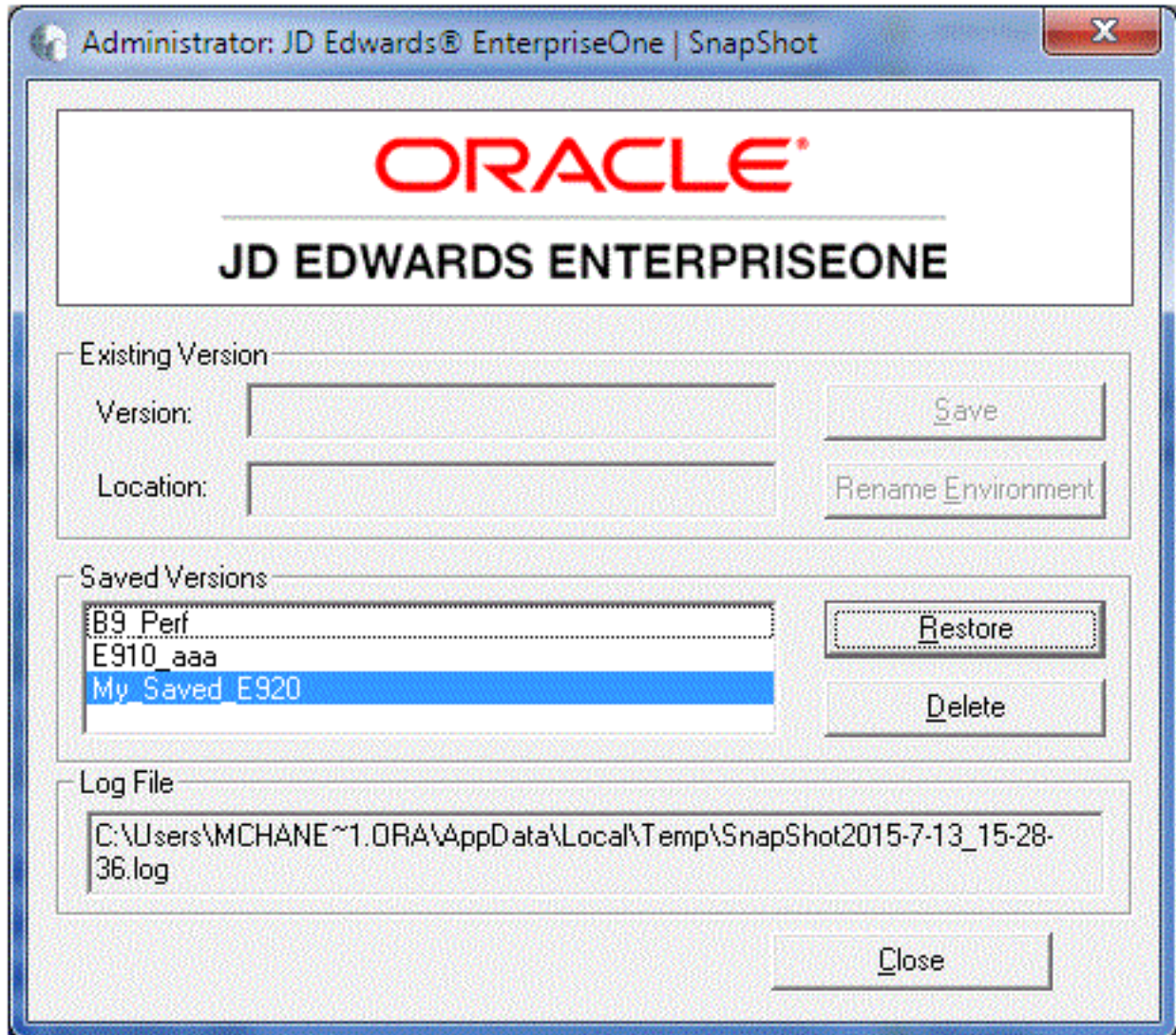
Provide a directory in which the snapshot will be saved. The directory should start with a backslash and be a valid Microsoft Windows directory name. It will be created on the indicated drive.

3. Click the **OK** button.

SnapShot saves a snapshot of the Development Client.

Restoring a Snapshot

To restore a snapshot:

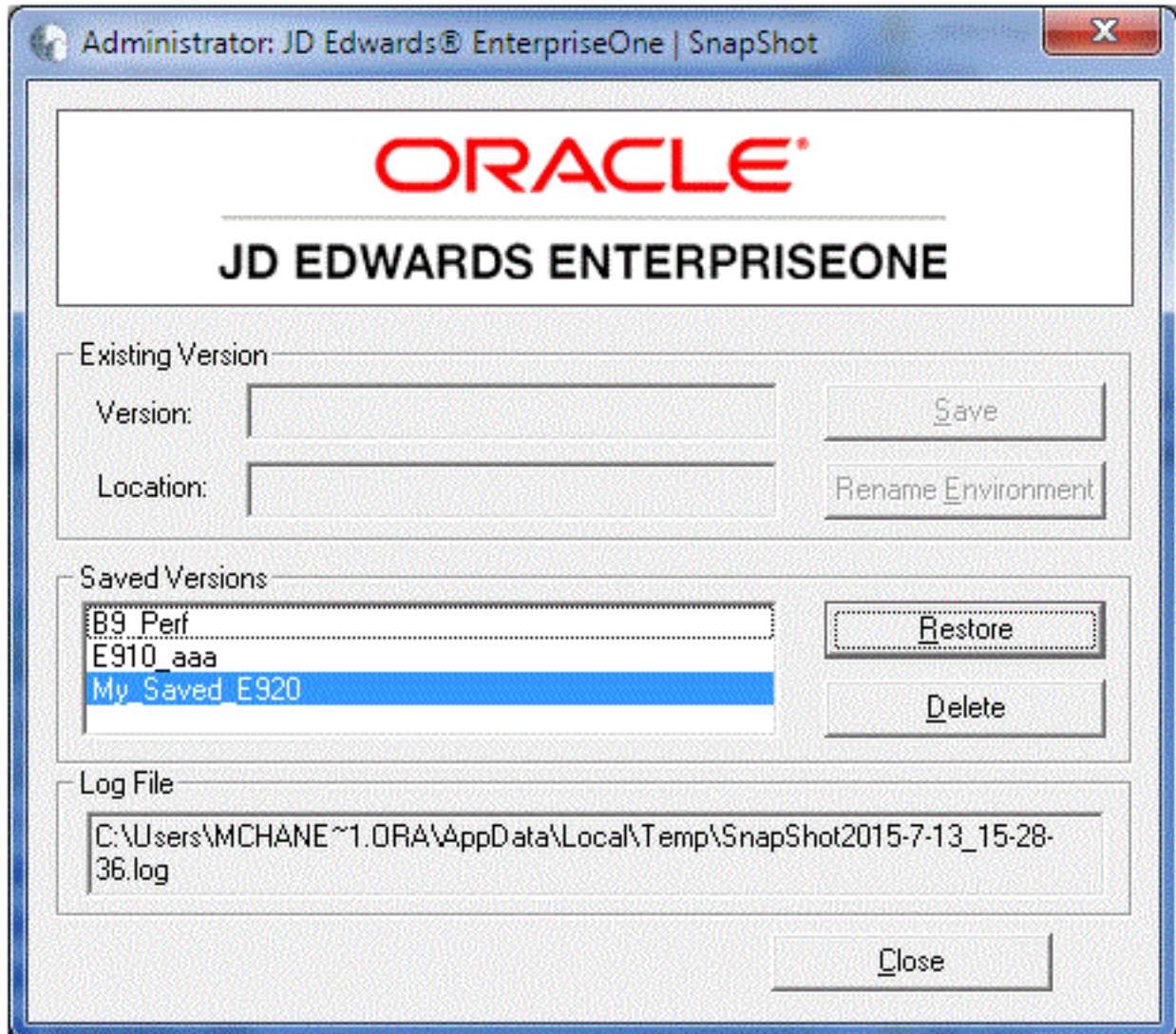


1. On the main SnapShot window and in the Saved Versions section, highlight the saved instance that you want to restore.
2. Click the **Restore** button.

SnapShot restores the selected instance of JD Edwards EnterpriseOne and makes it active.

Deleting a Snapshot

To delete a snapshot:



1. On the main SnapShot window and in the Saved Versions section, highlight the instance that you want to delete.
2. Click the **Delete** button.

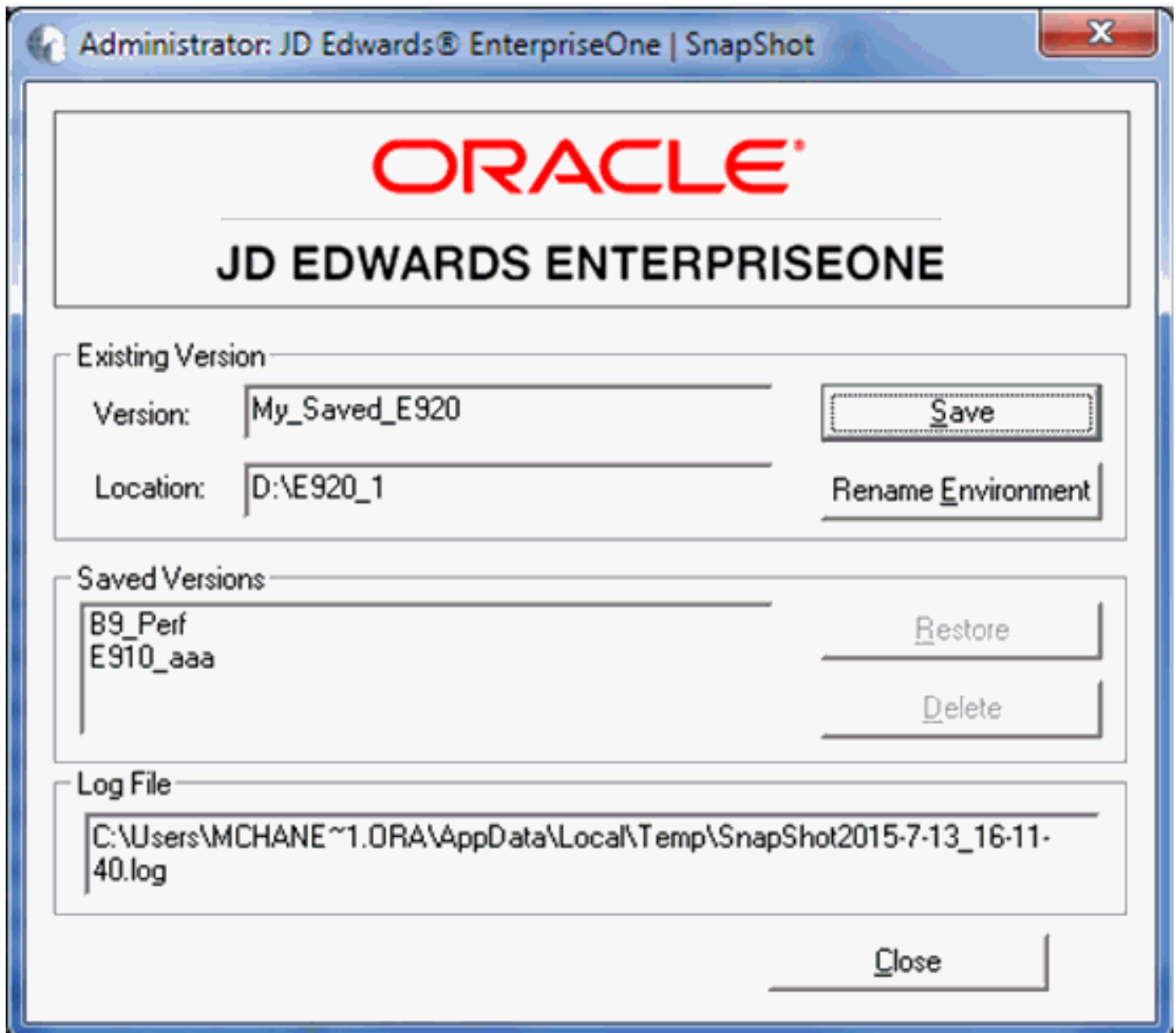
SnapShot completely removes the saved instance from the JD Edwards EnterpriseOne Development Client.

Renaming an Environment

You can use SnapShot to rename the installed JD Edwards EnterpriseOne environment and path code. An example of a use case for this functionality is when a JD Edwards EnterpriseOne administrator needs to promote one path code/environment combination to another.

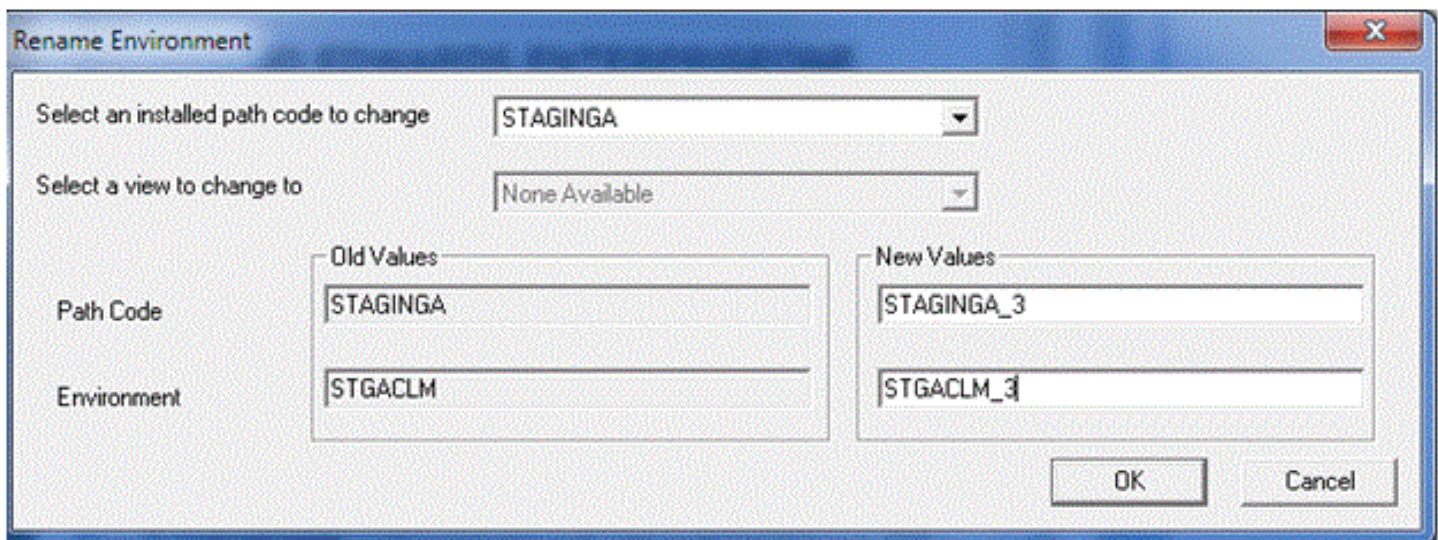
Note: When you use SnapShot the program does not update the database tables with the new path code and environment names. Instead, it simply updates the path code directory name and occurrences of the path code and environment in various files (for example, `jde.ini`, `jdbj.ini`, `jas.ini`, and `pathcode.inf`). If the new path code or environment does not exist in the JD Edwards EnterpriseOne system tables, you will need to update those tables yourself either through JD Edwards EnterpriseOne or by using a database editing tool such as Oracle SQLPlus.

To rename an environment in SnapShot:



1. On the main SnapShot window, ensure that an existing version of JD Edwards EnterpriseOne is active.

2. Click the **Rename Environment** button.



3. On Rename Environment, use the **Select an installed path code to change** drop-down to select the path code that you want to rename.
 - Note:** The **Old Values** section on the left side of the window displays old path code and environment names.
4. In the New Values section of the window, enter the new names for the environment you want to rename.
5. Click the **OK** button.
 - Note:** The section of the screen entitled **Select a view to change to** is available only to JD Edwards EnterpriseOne internal application developers.

Manually Backing Up Files and Settings

Once you have saved a snapshot for the Development Client, it is a good idea to manually backup the saved directory to ensure that your settings for that Development Client are secure.

The files and subdirectories that need to be backed up are found in the folder of each saved snapshot. You should backup these files and subdirectories only while the `snapshot.exe` program is not running. These files contain the information necessary to restore registry values and settings for each snapshot.

Set Logging for SnapShot Using the Registry

The Tools 9.2 version of SnapShot always outputs the maximum amount of logging information. Furthermore, by design there is no way to turn off logging. You can specify the name and location of the log file that is generated by adjusting a single registry setting.

CAUTION: Changes made to the Microsoft Windows registry happen immediately, and no backup is automatically made. Do not edit the Windows registry unless you are confident about doing so. Microsoft has issued the following warning with respect to the Registry Editor: "Using Registry Editor incorrectly can cause serious, system-wide problems that may require you to re-install Windows to correct them. Microsoft cannot guarantee that any problems resulting from the use of Registry Editor can be solved. Use this tool at your own risk."

By default, the SnapShot log is located in the `temp` directory of the Microsoft Windows user. This is the directory pointed to by the TEMP environment variable. You can determine the value of this TEMP variable in a number of ways including:

1. Control Panel > System
2. In a command prompt window, enter this command:

```
echo %TEMP%
```

3. In the Address Bar of Windows Explorer, enter this string:

```
%TEMP%
```

The default log file name is `SnapShot_<date-time>.log`.

Both the directory and name of the SnapShot log can be specified by editing the registry; however, the date-time stamp will always be inserted immediately before the period.

To change the log file directory and/or name:

1. Open the registry by clicking on Windows Start button and entering `regedit` in the search field.
2. Navigate to this node:

```
\HKEY_LOCAL_MACHINE\Software\Wow6432Node\JDEdwards\SnapShot
```

The first time that you run SnapShot, it creates a value (shown on the right-hand pane in regedit) called **LogFileName** with the default value **SnapShot.log**. You can change this value or, if it does not exist yet, you can add the value with name LogFileName, type string value, and the directory and/or file name of your choice.

3. The rules listed below are used for determining the final log file directory and name based on the value of LogFileName:
 - o In all cases, the date and time that `SnapShot.exe` is run will be inserted immediately before the period in the extension of the file name.
 - o If the value of **LogFileName** does not contain any backslashes, the name represents only the file name. The value of the Windows TEMP variable will be used as the directory.
 - o If the value of **LogFileName** contains backslashes but does not start with a drive letter or a backslash, everything up to the last backslash represents a subdirectory or hierarchy of subdirectories below the directory designated by the Windows TEMP variable. Everything after the last backslash is the file name.
 - o If the value of **LogFileName** starts with a backslash, it represents a subdirectory below the root directory of the drive (that is, directory "\"). The drive letter is derived from the drive specified in the Windows TEMP variable.
 - o If the value of **LogFileName** starts with a letter followed by a colon and backslash, the letter is considered the drive letter where the log will reside. Any other applicable rule in the preceding rules above then apply.

The following are examples of values of the **LogFileName** registry entry and the resulting log file path and name. In these examples, the assumed value of the TEMP variable is `c:\Users\John\AppData\Local\Temp` and assumes the log was created on June 5, 2012, at 3:46:9 PM.

Value for LogFileName	Resulting Log File
<code>SnapShot.log</code>	<code>C:\Users\John\AppData\Local\Temp\SnapShot_2012-6-5_15-46-9.log</code>
<code>MyFile.txt</code>	<code>C:\Users\John\AppData\Local\Temp\MyFile_2012-6-5_15-46-9.txt</code>
<code>MyTempDir\MyFile.txt</code>	<code>C:\Users\John\AppData\Local\Temp\MyTempDir\MyFile_2012-6-5_15-46-9.txt</code>
<code>MyTempDir\MyFile.txt</code>	<code>C:\MyTempDir\MyFile_2012-6-5_15-46-9.txt</code>
<code>D:\MyTempDir\MyFile.txt</code>	<code>D:\MyTempDir\MyFile_2012-6-5_15-46-9.txt</code>

4. Save the changes and exit the registry.

Troubleshooting

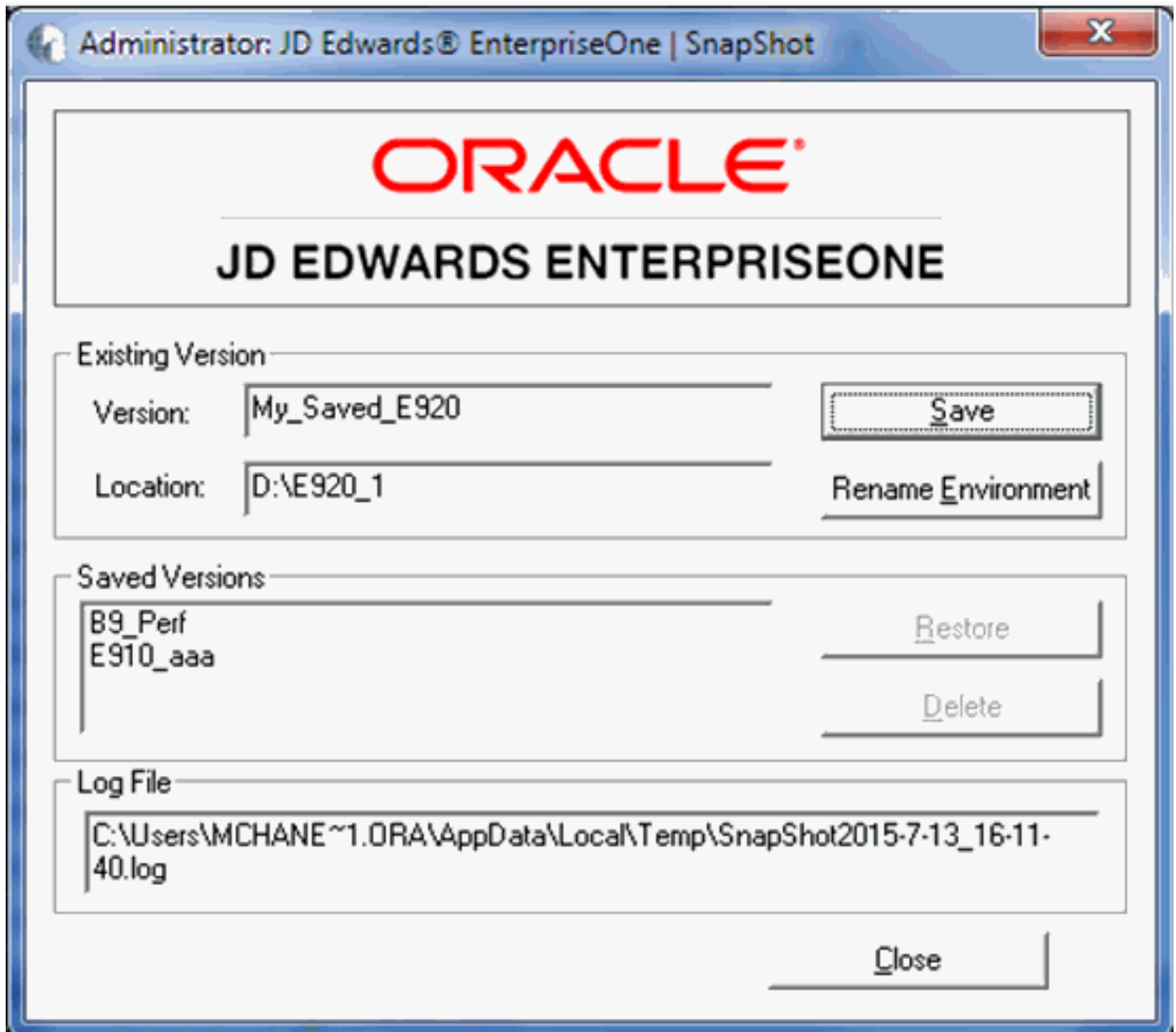
If SnapShot encounters a problem when trying to perform an action, it is designed to attempt to rollback the actions performed up to the point of failure. This means that during a save operation, SnapShot attempts to restore the JD Edwards EnterpriseOne instance back to a runnable state. If a failure occurs during a restore action, SnapShot attempts to resave the JD Edwards EnterpriseOne snapshot so you can correct the problem and then retry the action.

CAUTION: If a second error occurs when SnapShot is attempting to rollback changes, the error will likely result in either a non-runnable instance of JD Edwards EnterpriseOne or a saved snapshot that is corrupt. In either case, you will probably need to reinstall JD Edwards EnterpriseOne.

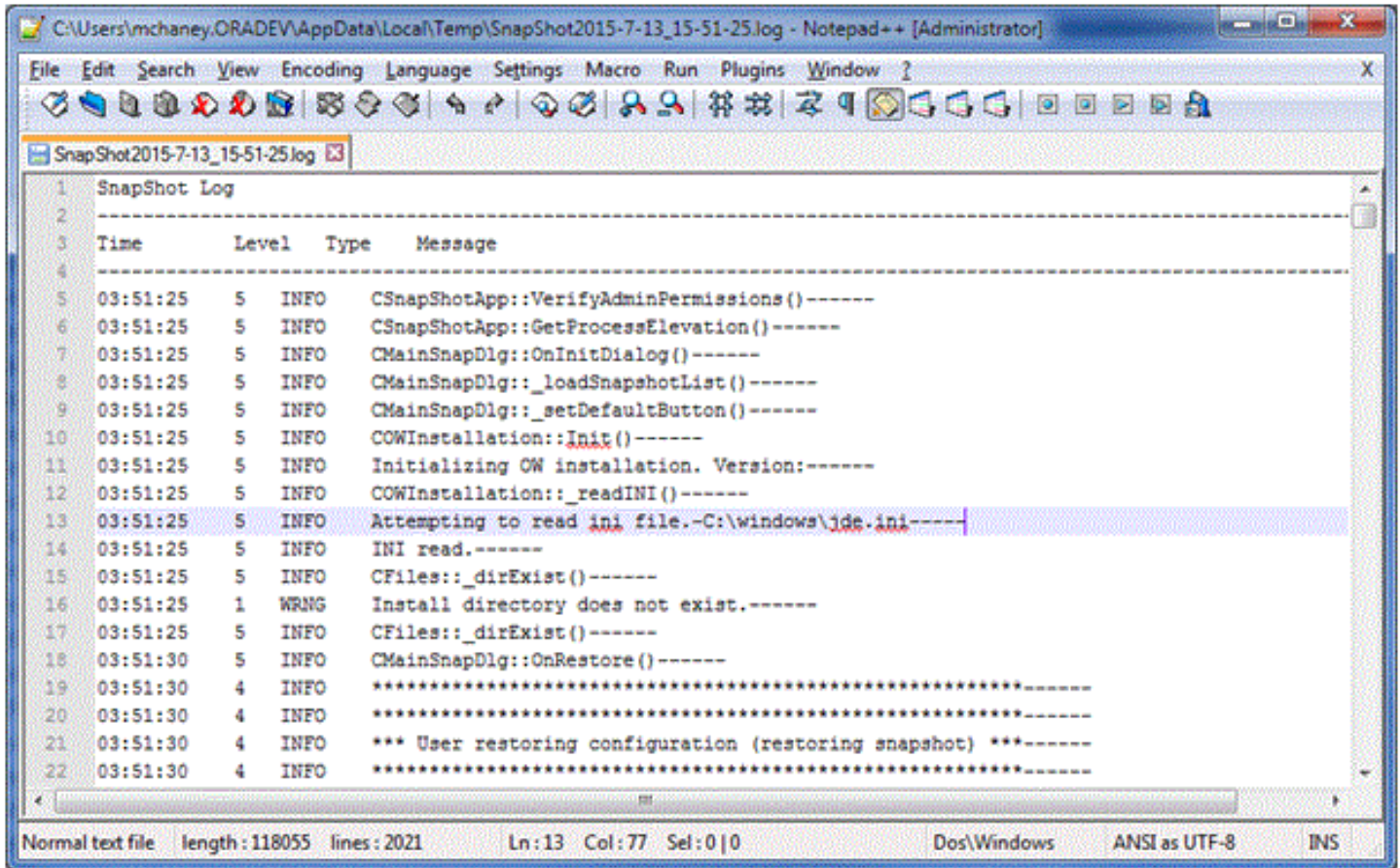
This section describes these topics:

- *Examining the Log File*
- *Error Handling*
- *Remedial Actions*

Examining the Log File



When an error is encountered in SnapShot, the first thing that you should do is to carefully examine any on screen error messages for an indication of what went wrong and why. If you are not able to determine the cause and possible resolution of an error by examining the error message on the screen, examine the log file. As shown in the preceding screen example, the location and name of the log file is specified in the **Log File** section near the bottom of the main SnapShot window.



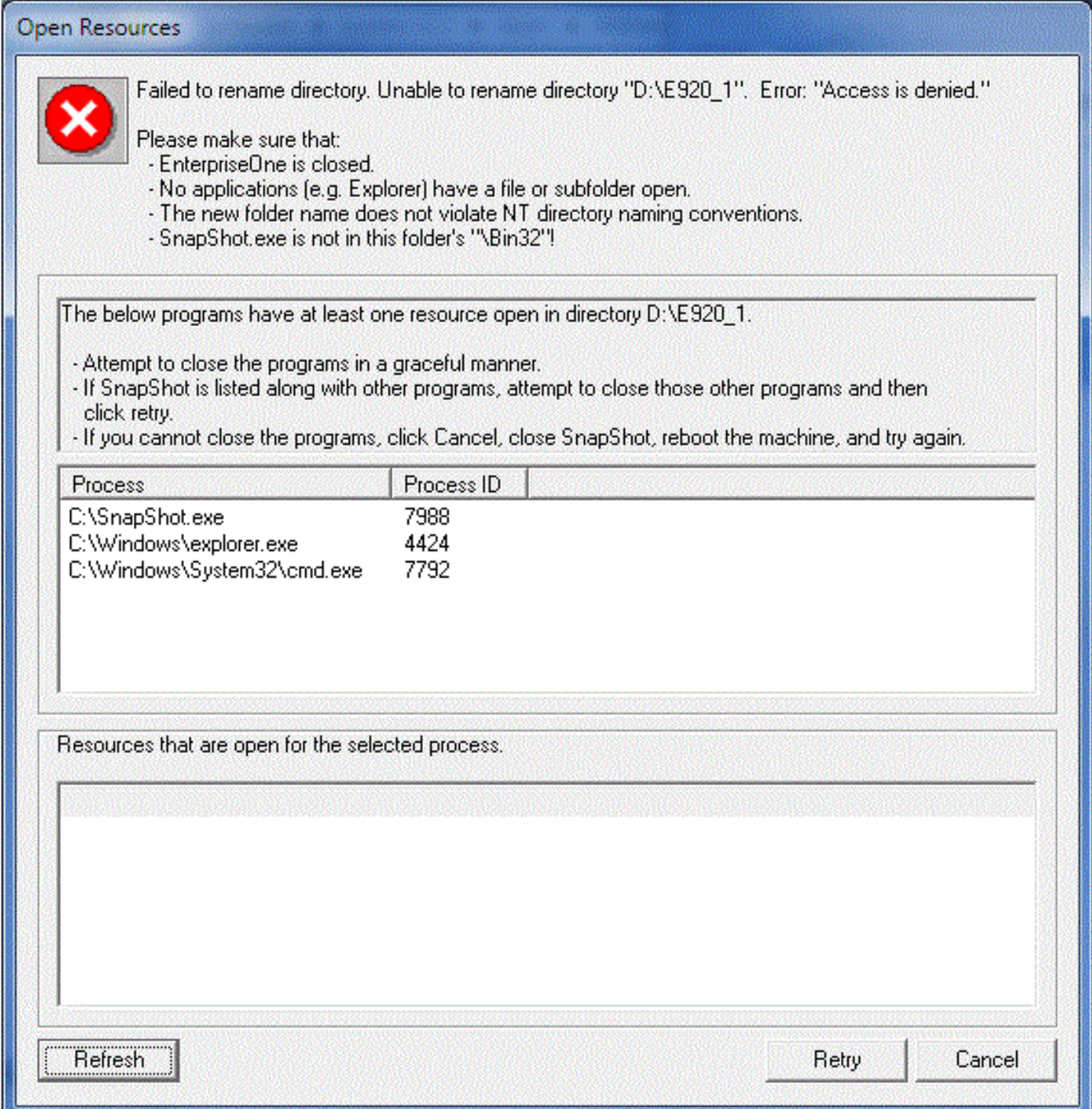
Above is an example of a SnapShot log file. When troubleshooting within the SnapShot log file, you should scan the **Type** column for a status of **ERR**, which indicates an error. If the error message itself is insufficient to isolate the cause of the problem, examine the messages immediately before and after the error for hints as to the root cause.

Error Handling


This section discusses these topics:

- *Locked Resources Prevent Directory Renaming*
- *Other Causes of Directory Renaming Failure*

Locked Resources Prevent Directory Renaming



Open Resources

 Failed to rename directory. Unable to rename directory "D:\E920_1". Error: "Access is denied."

Please make sure that:

- EnterpriseOne is closed.
- No applications (e.g. Explorer) have a file or subfolder open.
- The new folder name does not violate NT directory naming conventions.
- SnapShot.exe is not in this folder's "\Bin32"!

The below programs have at least one resource open in directory D:\E920_1.

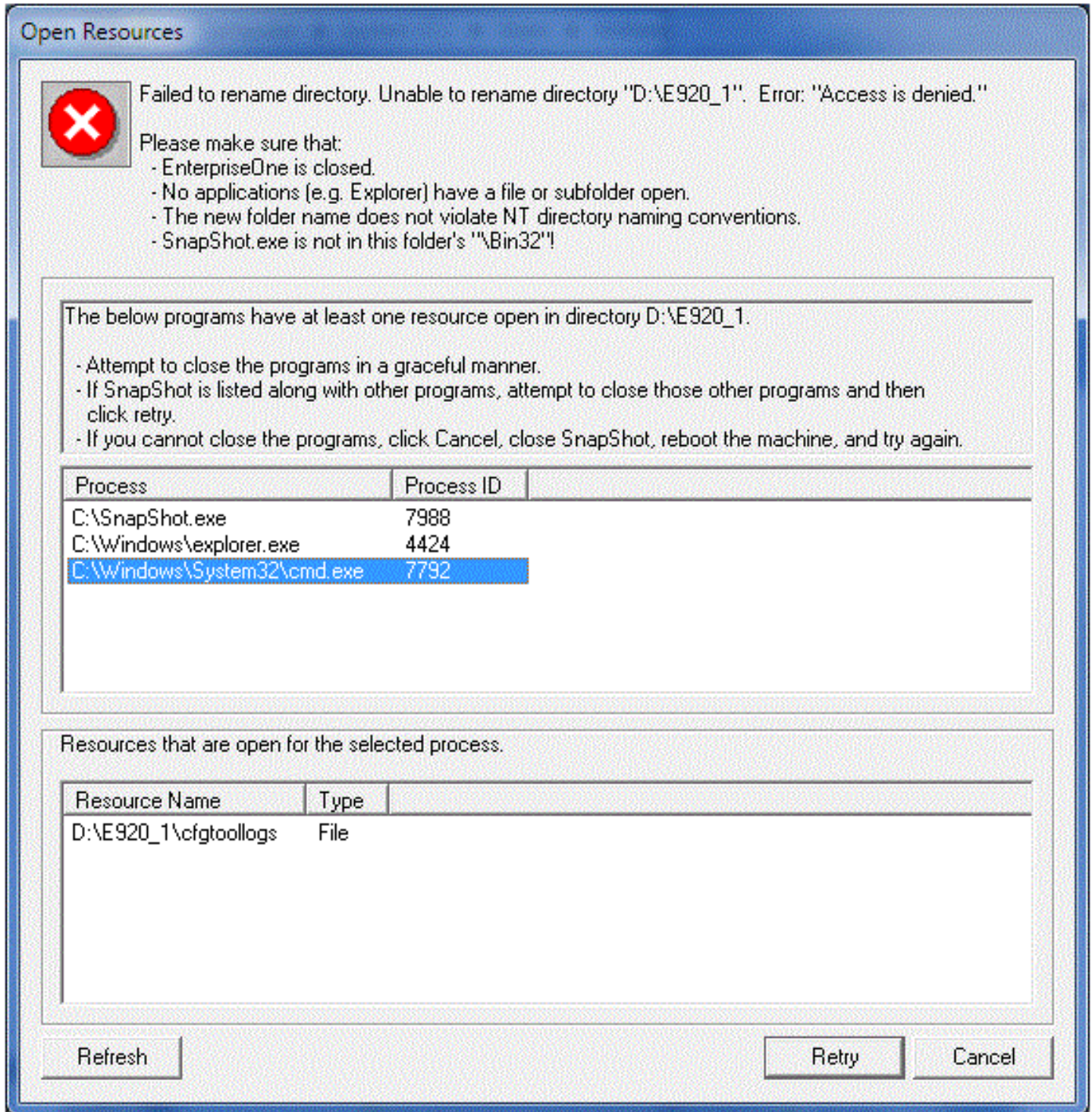
- Attempt to close the programs in a graceful manner.
- If SnapShot is listed along with other programs, attempt to close those other programs and then click retry.
- If you cannot close the programs, click Cancel, close SnapShot, reboot the machine, and try again.

Process	Process ID
C:\SnapShot.exe	7988
C:\Windows\explorer.exe	4424
C:\Windows\System32\cmd.exe	7792

Resources that are open for the selected process.

If an error occurs during a directory rename operation (for example, when saving or restoring a snapshot), the preceding window may appear.

The reason for the failure is displayed at the top of the window followed by some suggested remedies. In a box immediately below that are some recommendations to resolve the error. Another box lists processes running on the workstation that have one or more resources (for example, files, directories, handles, and so on) locked that prevented the directory rename action from succeeding—resulting in the **Access is denied** error. Click on a process in the list to get a list of open resources for that particular process.



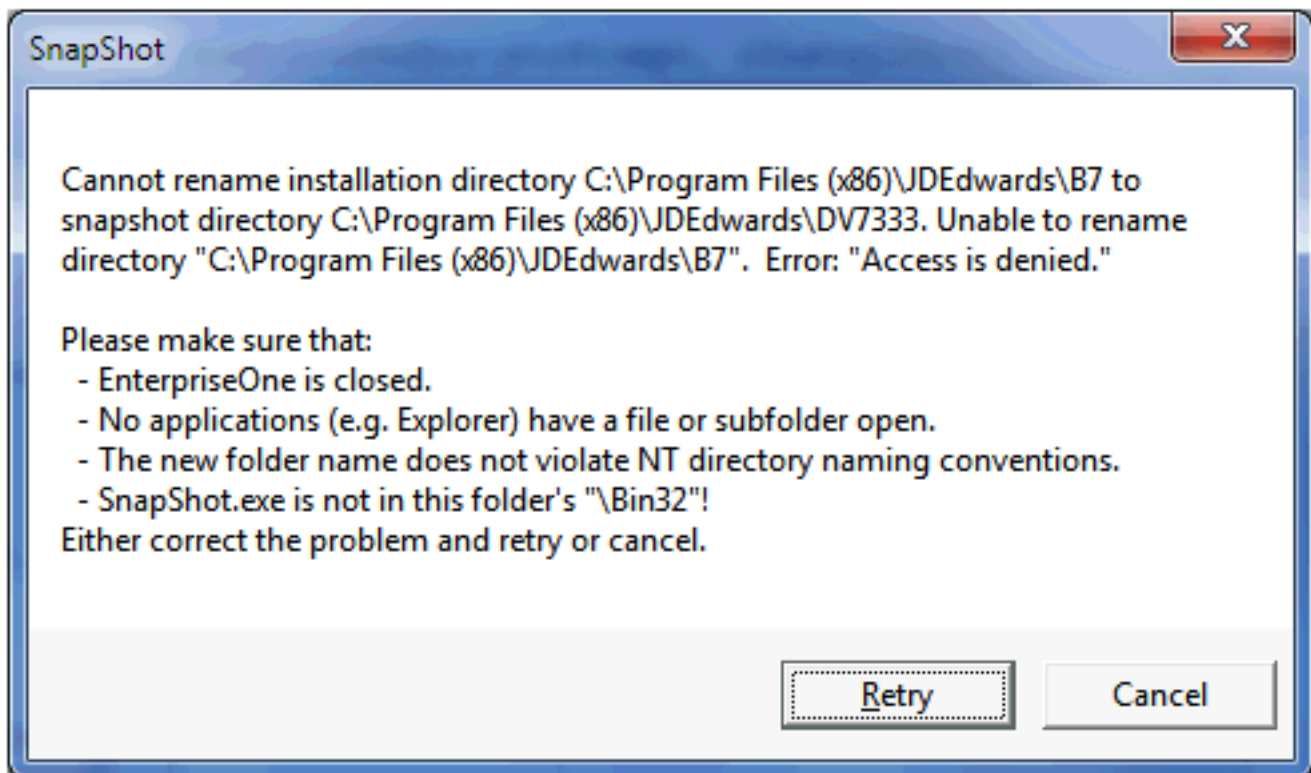
When you highlight a Process, the list of resources in the **Resources that are open for the selected process** section at the bottom of the window shows the type as **File** for both files and directories.

It is important that you follow these steps to resolve the file or directory locking problem:

1. Attempt to gracefully close the programs that have a resource open. That is, close the program in the normal manner such as selecting File > Exit from the program's main menu. You can attempt to close just the resource, but many programs continue to hold a lock on a resource (such as a file) even after closing that resource. Freeing the resource may require closing the actual program. For example, if Microsoft Word has a file locked, you may have to close Microsoft Word instead of simply closing the file from within Microsoft Word.
2. If the program does not terminate, you may have to resort to forcefully terminating it using Microsoft Task Manager.
3. The `Snapshot.exe` program may appear in the list of active programs either by itself or along with other processes that are locking resources. First, be sure that you are not running `Snapshot.exe` from within either the installation or the save directory or one of their subdirectories.
4. If the `Snapshot.exe` program is listed with other programs, try to close those other programs and then click **Retry**.
5. If `Snapshot.exe` is the lone program listed, simply click **Retry**. Many times, the rename action will continue after the second Retry.
6. Not all 64-bit programs are automatically shown in the list of locking processes. You may need to examine all the running programs on your system to determine which one may be preventing the rename action from succeeding.
7. If you cannot close the program(s) that holds the lock(s) on the necessary resource(s) or determine which program(s) holds a lock, click **Cancel**, exit from SnapShot, reboot the machine, run SnapShot and try the action again.

Other Causes of Directory Renaming Failure

Besides locked resources described in the preceding section, there are other reasons that can cause a directory rename operation to fail.



The preceding window may appear during a directory rename operation (that is, when saving or restoring a snapshot). In this case, either SnapShot could not determine which processes hold locks on resources in the installation or save directories or some other reason caused the directory rename to fail. For example, perhaps the user did not have read or write permissions on one of the affected directories or subdirectories.

Remedial Actions

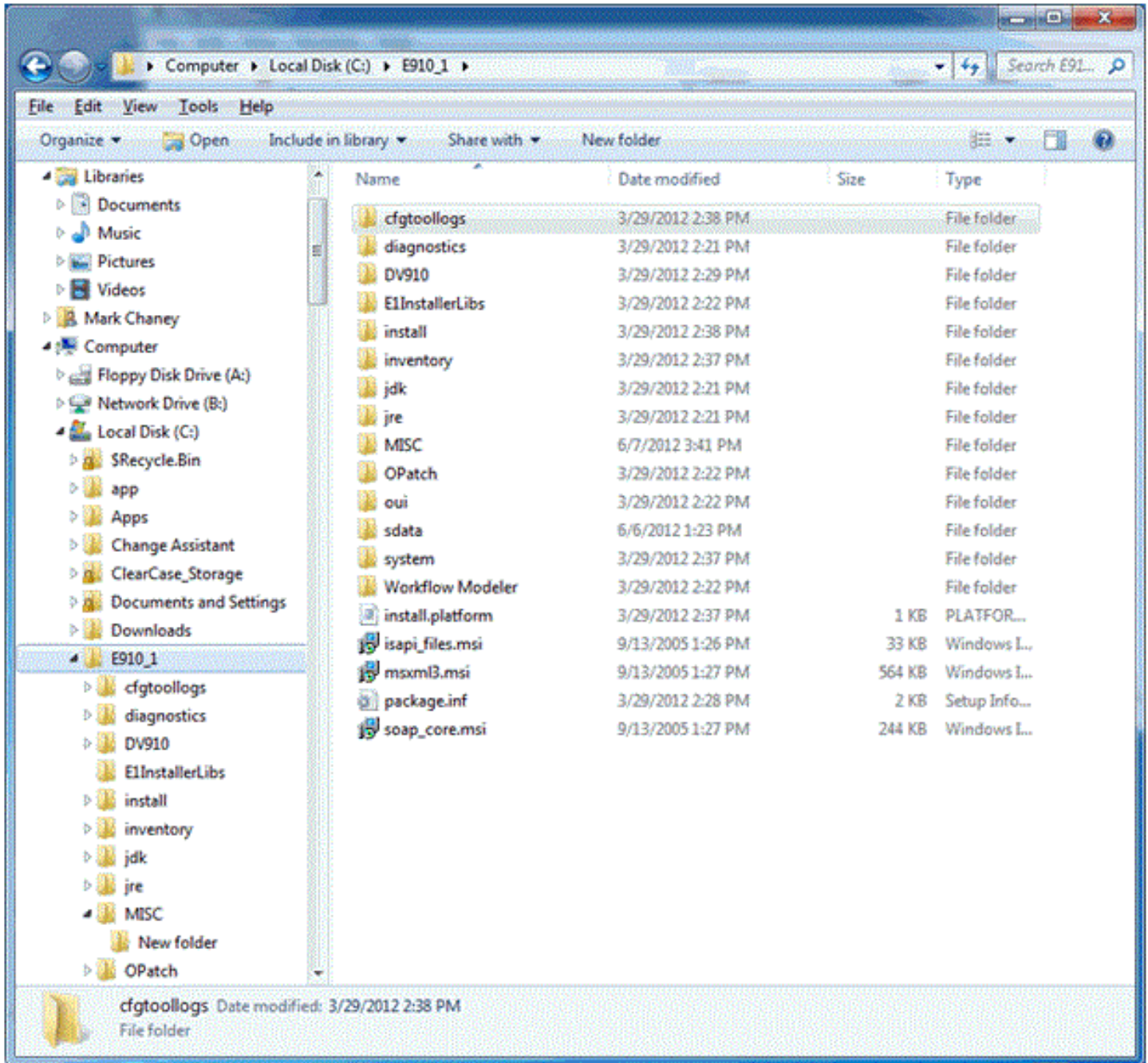
In some cases, SnapShot may not be able to recover from errors that occur during a save or restore action. You may be able to salvage either the JD Edwards EnterpriseOne installation or the saved instance. If these operations fail, you will need to reinstall JD Edwards EnterpriseOne.

This section describes these topics:

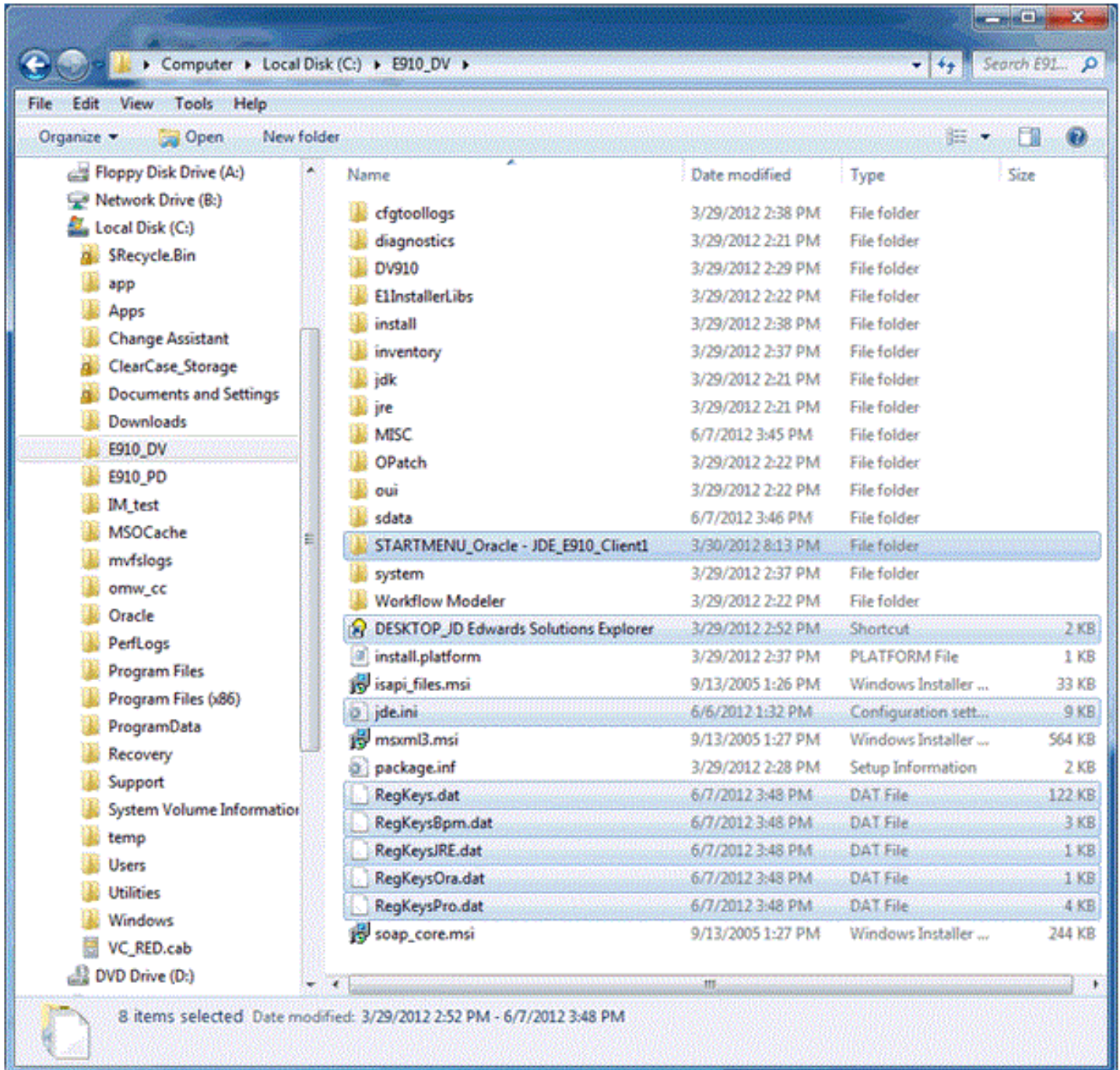
- *Examples of Healthy Environments*
- *Simple Fixes*

Examples of Healthy Environments

This section illustrates a healthy JD Edwards EnterpriseOne installation and saved snapshot directories and registry settings.



The preceding image shows the installation directory of a healthy JD Edwards EnterpriseOne instance.



In the preceding image example, note that when you save a snapshot of the JD Edwards EnterpriseOne installation, the highlighted files and subdirectory shown above are created. Here are brief descriptions of the new files and subdirectory.

- *STARTMENU*.**

The subdirectory that is prefixed with `STARTMENU` is the folder in the Start menu for the original installation.

- *DESKTOP*.**

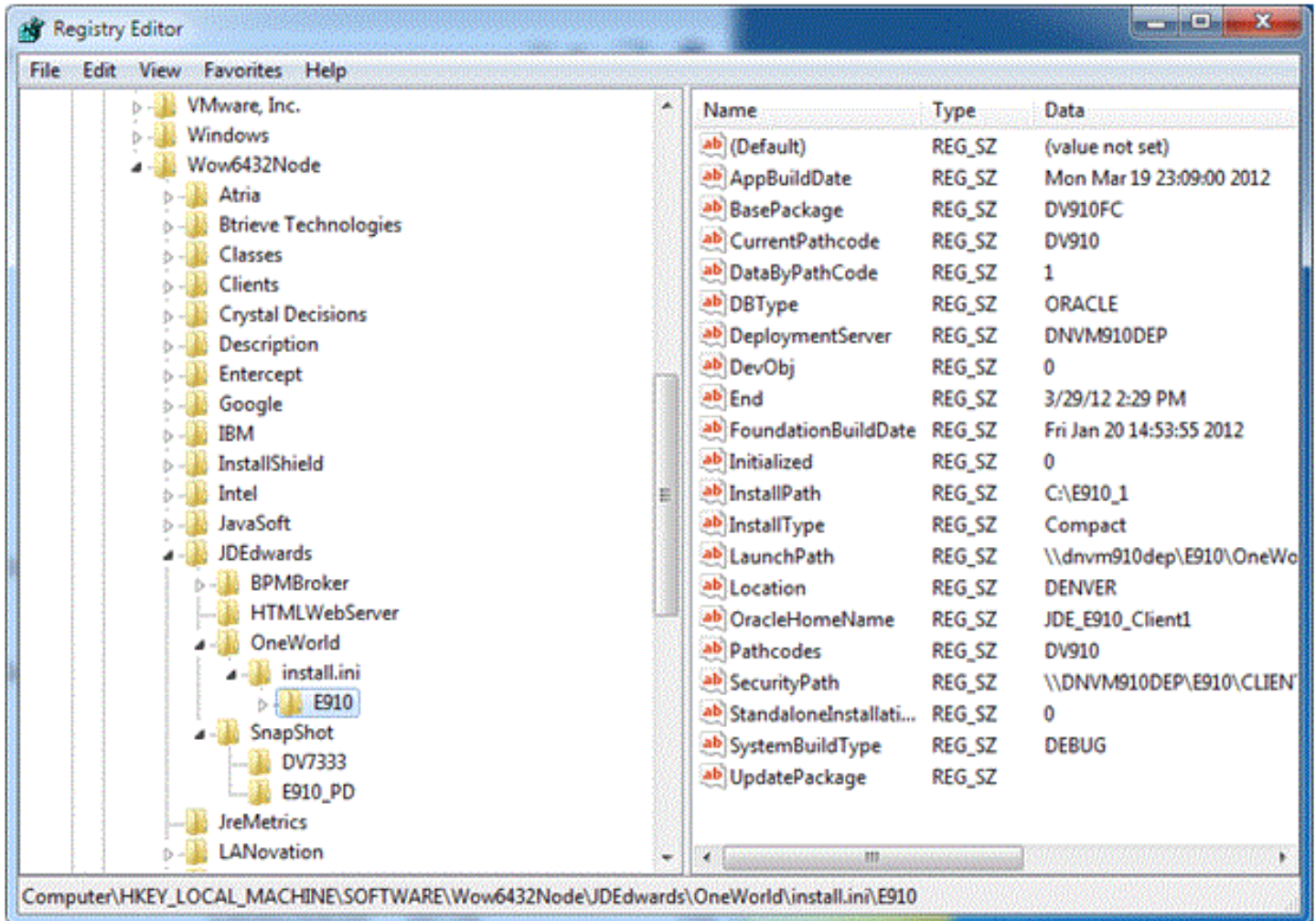
The file that starts with `DESKTOP` is the shortcut to JD Edwards EnterpriseOne that was on the desktop of the workstation.

- *jde.ini*

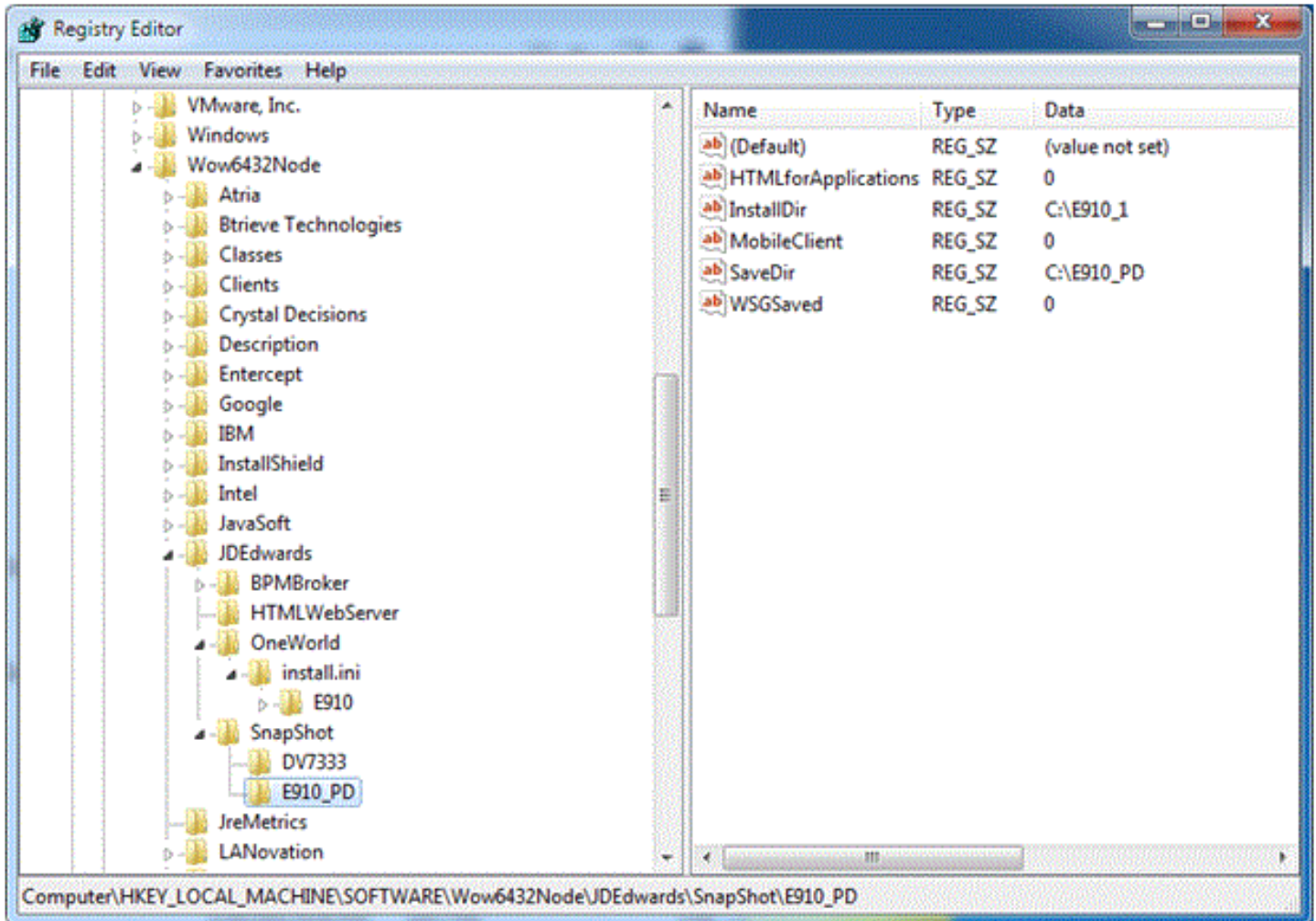
The `jde.ini` file is the same file that was in the `c:\windows` directory.

- *RegKeys*.**

The files that are prefixed with `RegKeys` are binary files that contain the saved registry entries.



The preceding image shows the registry entries for a healthy JD Edwards EnterpriseOne Development Client installation.



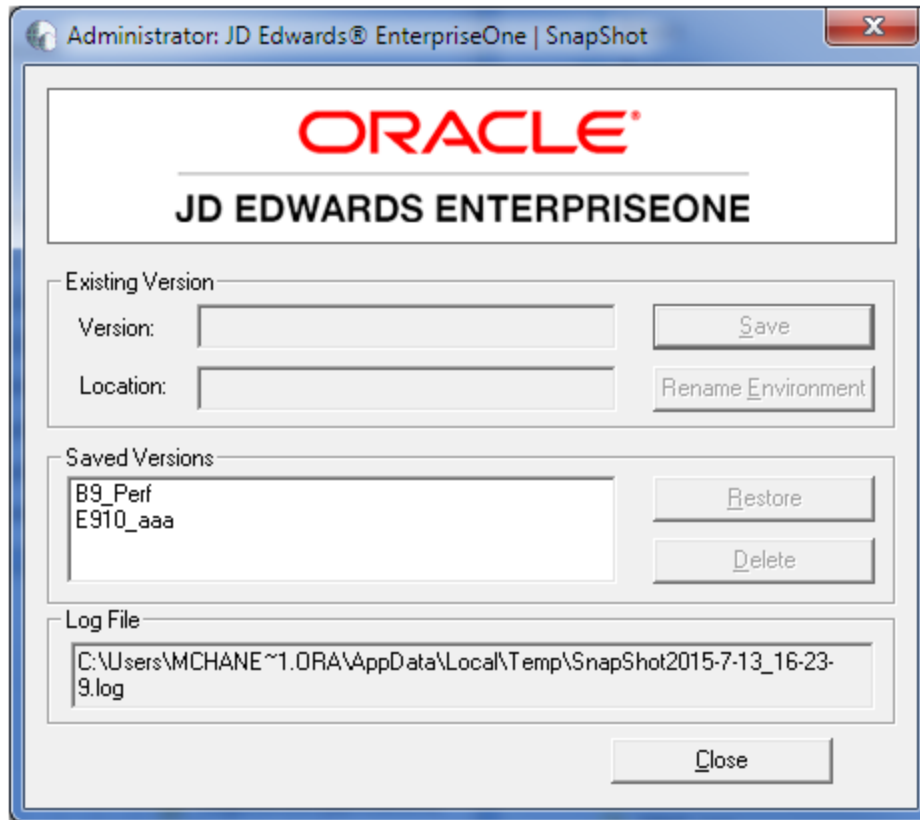
The preceding image shows the registry keys for a saved JD Edwards EnterpriseOne snapshot.

Simple Fixes

Not all issues can be resolved by simple steps. However this section describes a few simple fixes for these conditions:

- *Missing Version Information*
- *Missing Saved Version*

Missing Version Information



If the **Existing Version** fields are empty when you run `Snapshot.exe` and you are certain that a JD Edwards EnterpriseOne instance is active, it is likely that this file is missing:

```
c:\Windows\jde.ini
```

If you happened to save a copy of the `jde.ini` file when you last saved a snapshot of this installation, you can copy that `jde.ini` file into the `c:\Windows` directory and rerun `SnapShot.exe`.

Missing Saved Version



If a saved snapshot is not listed in the **Saved Versions** field and you know that the saved snapshot exists, some registry entries are probably missing or pointing to the wrong directory.

To resolve this issue, perform these steps:

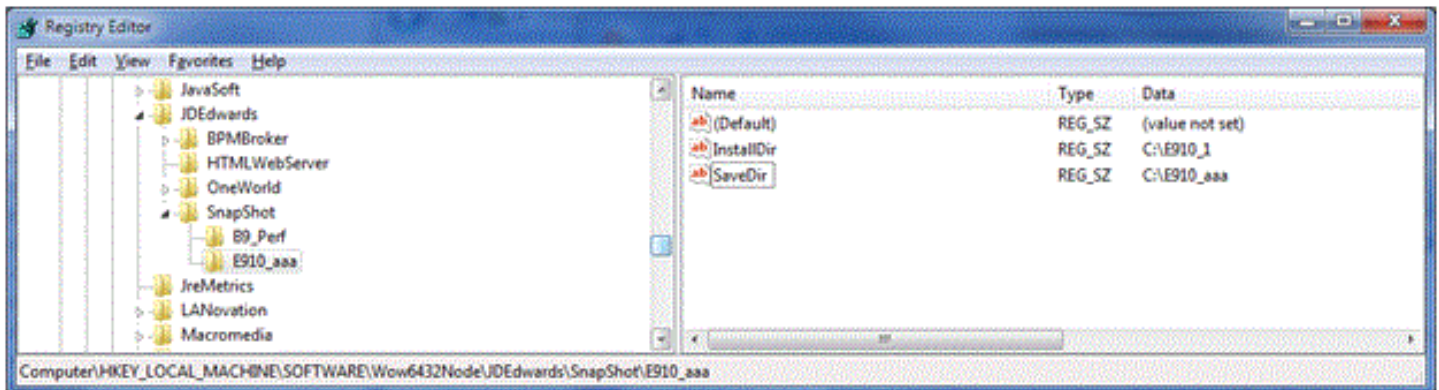
1. Edit the registry with `regedit.exe`.
2. Create a subkey under this path:

```
\HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\JDEdwards\SnapShot
```

The name that you give for the subkey should be the name of the saved snapshot.

3. Click on the subkey that you just created.
4. Create a string value called **SaveDir**.
5. Set the value data for this to the directory where the saved snapshot is stored.
6. Create a second string value called **InstallDir**.
7. Set the value data for this to the installation directory (that is, the directory in which the saved snapshot will be restored).

The following image illustrates properly configured registry entries.



11 Uninstalling the Development Client

Uninstalling the Development Client

This chapter describes how to uninstall the Development Client. This uninstall is interactive. If you want to perform a silent uninstall by running OUI from the command line, refer to the instructions in *Uninstalling a Development Client from the Command Line*.

CAUTION: Be sure to follow the guidelines in the preceding sections of this guide entitled:

- *Microsoft Windows Security*
- *Minimizing Locked Files*

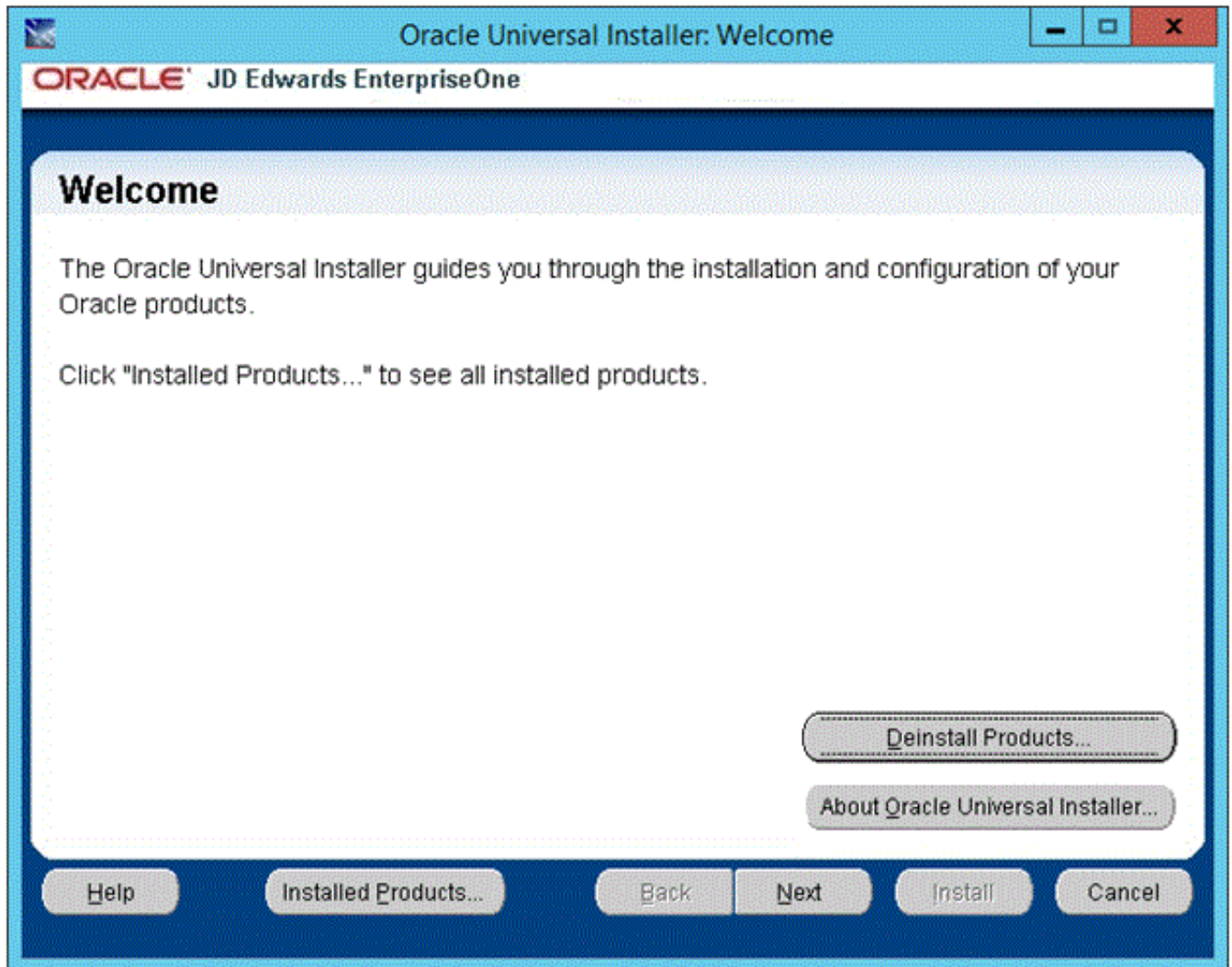
Note: This document uses the terms "deinstall " and "uninstall" interchangeably. The terms are synonymous and describe the removal of a product from your workstation.

To uninstall the Development Client:

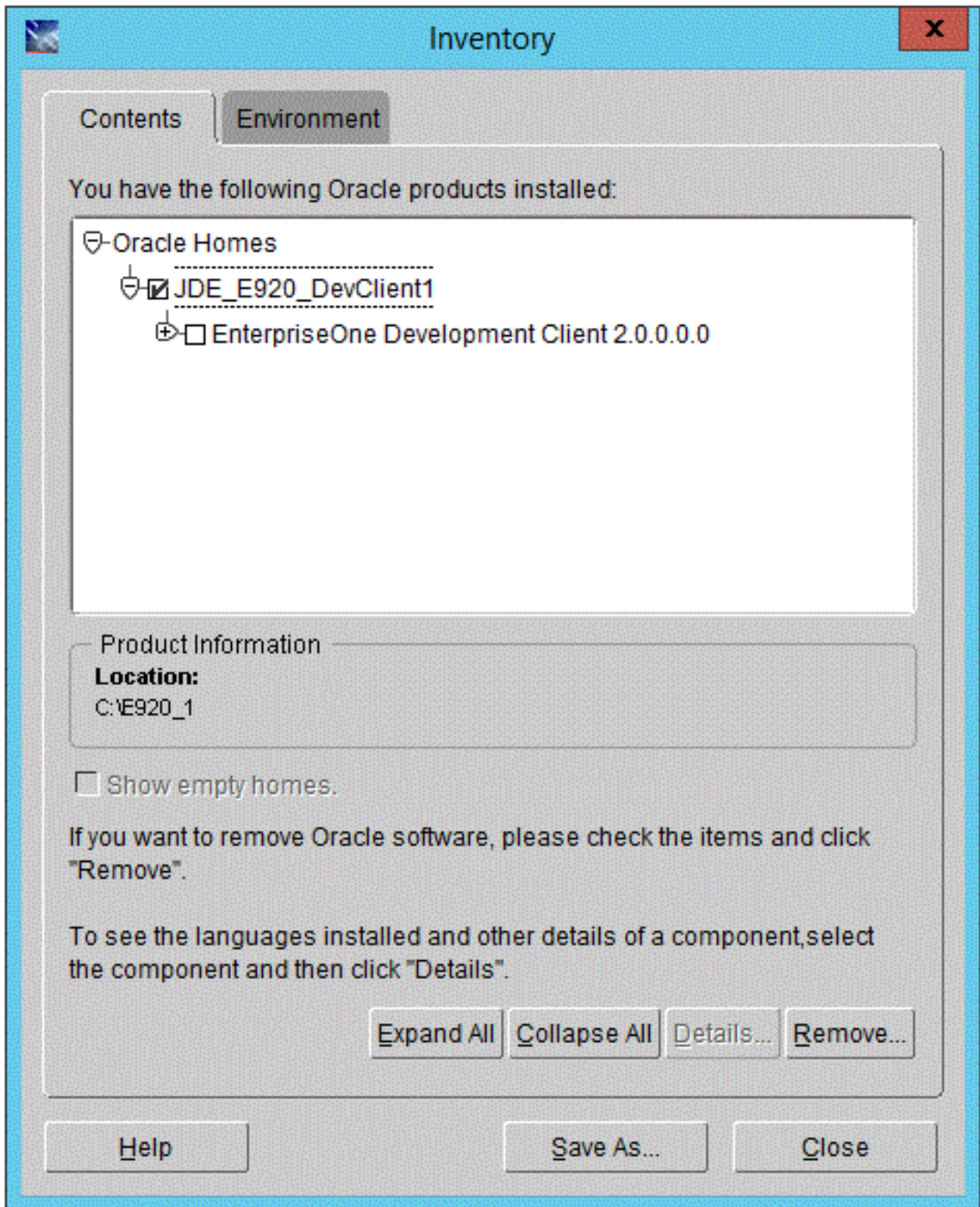
1. Navigate to Oracle - *Oracle_Home_Name* > Oracle Installation Products > Universal Installer

where *Oracle_Home_Name* is the name of the installation directory that you provided when installing the Development Client. There can be multiple *Oracle_Home_Names* if you installed multiple Development Client Packages or multiple Oracle products. Each of these homes is associated with a particular product and has a unique setup and association for uninstalling using the OUI installer. It is important that you navigate to and run the correct OUI installer for the specific product you want to uninstall.

2. Highlight the Universal Installer, right click and choose to **Run as administrator**.



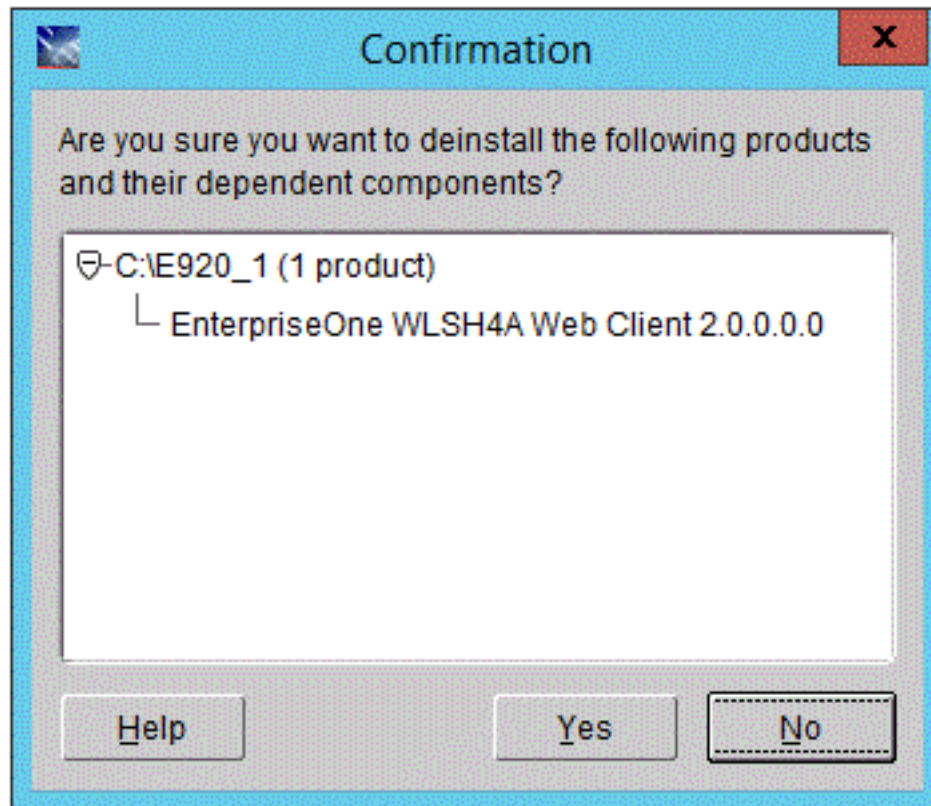
3. On Welcome, click the **Deinstall Products...** button.



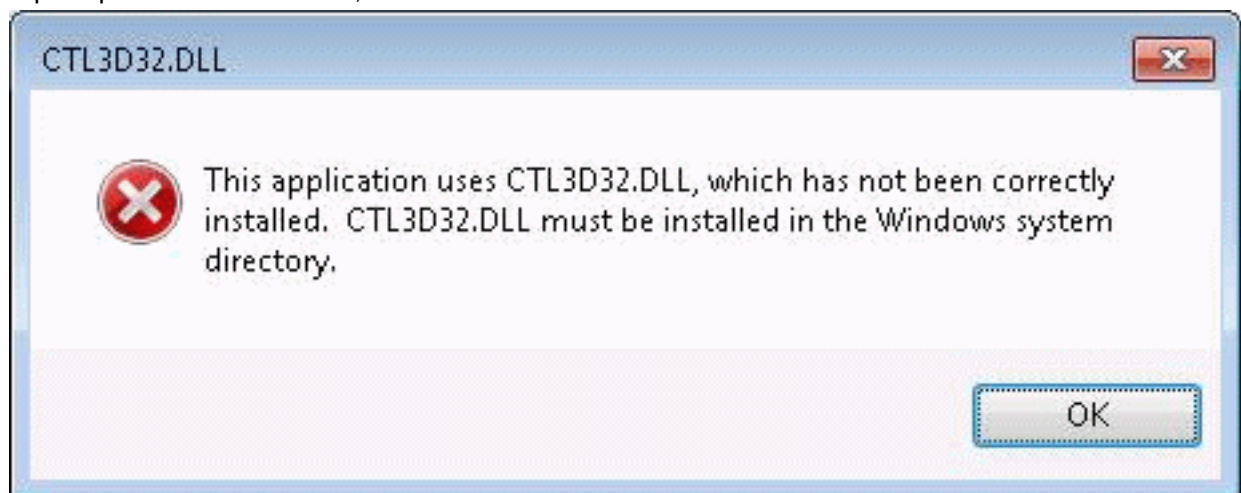
- On Inventory, turn on the check box next to the Oracle Home for the Development Client that you want to uninstall.

Note: At this step, you should select only the Oracle Home that is associated with this particular OUI. That is, the Oracle Home name that you select on this screen should match the Oracle Home name that you navigated to in Step 1.

- Click the **Remove...** button.



- When prompted for confirmation, click the **Yes** button.



- If you get the pop-up message box shown above, you can ignore it. Click the **OK** button.
- After the uninstallation is complete, exit the OUI installer.

9. Verify that the installation directory (Oracle Home) for the uninstalled Development Client has been deleted. If it still exists, you should manually delete it.

12 Uninstalling the Oracle Local Database

Uninstalling the Oracle Local Database

Note: This document uses the terms "deinstall" and "uninstall" interchangeably. The terms are synonymous and describe the removal of a product from your workstation.

With one small exception, the steps are identical to uninstall either the Oracle 12c or Oracle 11gR2 local database from the Development Client. The exception is noted in the steps below.

When the Oracle Enterprise Edition (OEE) database was installed, it was installed into a subdirectory called **E1Local** under a base directory. By default, this base directory is `c:\oracle`. This means that the database was installed into `c:\oracle\E1Local` by default. This path is used in the uninstall steps listed below.

Follow these steps to uninstall the OEE local database.

1. Stop the database services from Control Panel:
 - o OracleE1LocalTNSListener
 - o OracleServiceE1LOCAL
2. Be sure no Oracle processes from the `c:\oracle\E1Local` directory are running.
3. Open a command prompt window with **Run as administrator**.
4. Run this program:

```
C:\Oracle\E1Local\deinstall\deinstall.bat
```

Note: It is important that you do not "cd" to any directory below `c:\oracle` to run this command. If you do make one of these directories the current directory, the OUI deinstaller will not be able to delete that directory.

5. During installation, the `OEE12Setup.exe` program should have created several files in the `c:\oracle\E1Local\deinstall` directory. If the files were successfully created, the `deinstall.bat` program will not prompt for any input from the user. If for some reason the files were not created, the `deinstall.bat` program prompts the user for information needed to uninstall the database. You can take the default values (shown in square brackets) for most of the prompts. These are the prompts:
 - a. Specify all Single Instance listeners that are to be de-configured [LISTENER]:
 - b. Specify the list of database names that are configured in this Oracle home [E1LOCAL]:
 - c. Specify the type of this database (1.Single Instance Database|2.Oracle Restart Enabled Database) [1]:
 - d. Specify the diagnostic destination location of the database [C:\Oracle\diag\rdbms\ellocal]:
 - e. Specify the storage type used by the Database ASM|FS []:

This prompt requires a response. Enter FS.
 - f. Specify the list of directories if any database files exist on a shared file system. If 'E1LOCAL' subdirectory is found, then it will be deleted. Otherwise, the specified directory will be deleted. Alternatively, you can specify list of database files with full path []:
 - g. Specify the flash recovery area location, if it is configured on the file system. If "E1LOCAL" subdirectory is found, then it will be deleted. []:

- h. Specify the database spfile location []:
- i. Do you want to continue (y - yes, n - no)? [n]:

This requires a response. Enter "y".

Important: If you go through the above prompts, you also need to delete the registry key

`\HKEY_LOCAL_MACHINE\SOFTWARE Wow6432Node\ORACLE\KEY_E1Local.`

6. When the uninstall finishes, be sure that the following directories do not exist. If they do, you will need to manually delete them.

Oracle 12c and 11gR2

`C:\Oracle\E1Local`

Oracle 12c only

`C:\Oracle\oradata`

CAUTION: It is very important that no files exist in the above directory or directories (as applicable) when you next attempt to install the OEE database. If any files do exist, the OEE installation will probably fail. If the database does not uninstall cleanly for some reason, you will need to manually remove it. Follow the instructions in the Appendix of this guide entitled: *Manual Cleanup of an Uninstalled Oracle Database*.

13 Troubleshooting the Installation Process

Log Files

One of the first things that you should do when an installation finishes-whether successfully or not-is to examine the log files. Not all errors are propagated up to OUI where the main Graphical User Interface can display an error message box.

Open OUI log files in a text editor and search for these words:

- SEVERE - This indicates that an error occurred that should not be ignored.
- Exception - Some of these may be ignored. You have to determine if they are serious enough to warrant concern. For example, an exception that occurs when copying a file may not be of concern to you because you will not run the Development Client's functionality that uses that file. If you are in doubt whether or not you can ignore an error, contact Oracle's Global Customer Support.

This section contains the following topics:

- *Development Client*
- *Web Client*

Development Client

The bitness of the Development Client's installer is one factor that determines which packages it can install. If the installer is 64-bits, it can install only 64-bit packages; if it is 32-bits, it can install only 32-bit packages. The bitness of the installer dictates where its logs will reside.

- **64-bit installer**

```
C:\Program Files\Oracle\inventory\logs
```

- **32-bit installer**

```
C:\Program Files (x86)\Oracle\inventory\logs
```

Three files will be created in the above directory:

- `installActions<date_time>.log`
- `oraInstall<date_time>.err`
- `oraInstall<date_time>.out`

where `<date_time>` is the date and time that the installation started.

Note: Determining which logs belong to a particular OUI installer. Because OUI is used for multiple Oracle products (for example, OEE database client, E1 Development Client, WebLogic Server Web Client (WLSH4A), WebSphere Server Web Client (WASH4A), and others), the logs directory will contain installation files for multiple products. To determine which installer created a set of files (.log, .err, and .out), you should edit the `installActions<date_time>.log`. The first line of the log has this form `using paramFile: <installer_directory>\oraparam.ini`. For example: `using paramFile: \\dep_svr\e920\OneWorld Client Install\install\oraparam.ini`. Use the path of the `oraparam.ini` file to determine the installer. In the above example, note that the installer is on the Deployment Server and is in this directory: `OneWorld Client Install\install`. This indicates that the set of .log, .err, and .out files with the given time stamp were created by the Development Client installer.

When the installation completes, the logs relevant to the current installation are copied to the directory

```
<Oracle_Home_dir>\cfgtoollogs
```

For example:

```
C:\E920\cfgtoollogs
```

Additional logs are located in subdirectories under:

```
<Oracle_Home_dir>\cfgtoollogs
```

For example:

```
C:\E920\cfgtoollogs\oui
```

Web Client

The WebLogic Web Client (WLSH4A) and WebSphere Web Client (WASH4A) installers must match the bitness of the Development Client installer, so their logs (.log, .err, and .out) are also located in one of these directories:

- **64-bit installer**

```
C:\Program Files\Oracle\inventory\logs
```

- **32-bit installer**

```
C:\Program Files (x86)\Oracle\inventory\logs
```

Three files will be created in the above directory:

- `installActions<date_time>.log`
- `oraInstall<date_time>.err`
- `oraInstall<date_time>.out`

where `<date_time>` is the date and time that the installation started.

Note: Determining which logs belong to a particular OUI installer. Because OUI is used for multiple Oracle products (for example, OEE database client, E1 Development Client, WebLogic Server Web Client (WLSH4A), WebSphere Express Web Client (WASH4A), and others), the logs directory will contain installation files for multiple products. To determine which installer created a set of files (.log, .err, and .out), you should edit the `installActions<date_time>.log`. The first line of the log has this form `Using paramFile: <installer_directory>\oraparam.ini`. For example: `Using paramFile: \\dep_svr\e920\OneWorld Client Install\ThirdParty\WebDevFeature\WLSH4A\install\oraparam.ini`. Use the path of the `oraparam.ini` file to determine the installer. In the above example, note that the installer is on the Deployment Server and is in this directory: `WLSH4A\install`. This indicates that the set of .log, .err, and .out files with the given time stamp were created by the WLSH4A installer.

When the installation completes, the logs relevant to the current installation are copied to the directory

```
<Oracle_Home_dir>\cfgtoollogs
```

For example:

```
C:\E920\cfgtoollogs
```

Additional logs are located in subdirectories under:

```
<Oracle_Home_dir>\cfgtoollogs
```

For example:

```
C:\E920\cfgtoollogs\oui
```

Microsoft Firewall

Symptom:

The WLSH4A installer hangs and the bottom of the installation log shows an error indicating an attempt to connect to Node Manager (WebLogic) timed out. The installation log is located at:

- **64-bit installer**

```
C:\Program Files\Oracle\inventory\logs
```

- **32-bit installer**

```
C:\Program Files (x86)\Oracle\inventory\logs
```

Cause:

The Windows firewall blocked the connection to 127.0.0.1 using port 5556, which is the default port used by WLSH4A to connect to the Node Manager of WebLogic.

Solution:

Temporarily turn off Windows firewall and re-run the installer.

Microsoft Windows IPv4 Requirement

The JD Edwards EnterpriseOne Development Client requires Microsoft Windows Internet Protocol Version 4 (IPv4) for connectivity to the OEE database. It cannot function with OEE using IPv6.

If your Development Client installation is not working as expected, use this procedure to determine if the problem is due to your Windows machine using IPv6 and if so, to remedy:

1. After installing the local Oracle database, use a text editor to open the `log.xml` file which is typically located in this directory

```
C:\Oracle\diag\tnslsnr\[MACHINE_NAME]\listener>alert\.
```

2. Examine the contents of the `log.xml` file for indicators that the machine is using IPv6 addresses.

IPv6 addresses can be distinguished by alphanumeric digits separated by colons, rather than periods as in IPv4 addresses.

One example is if you see `host_addr='::1'>`. This indicates an IPv6 address, which in this case is the machine's local loopback address, whose equivalent IPv4 address is 127.0.0.1.

Another example that indicates the use of IPv6 is if this string exists:

```
host_addr='fe80::7045:1aba:cb6d:1b50%13'
```

3. If you see references to IPv6 addresses in the logs after installing the Oracle local database, then you may need to uninstall the Development Client and Oracle database as described in the chapters of this guide entitled: *Uninstalling the Development Client* and *Uninstalling the Oracle Local Database*.

Also, you may possibly need to perform additional cleanup for the Development Client and Oracle Database as described in the appendices of this guide entitled: *Manual Cleanup of an Uninstalled Development Client* and *Manual Cleanup of an Uninstalled Oracle Database*.

4. After the uninstall and cleanup is complete, you must apply a software patch from Microsoft to disable IPv6 before reinstalling the Development Client and the Oracle local database. The Microsoft patch for disabling IPv6 is at the following link:

How to disable IPv6 or its components in Windows

<http://support.microsoft.com/kb/929852>

On the above Microsoft web page, click the link labeled **Disable IPv6** (Microsoft Fix it 50409).

5. After you apply the Microsoft patch to disable IPv6, you can reinstall the Oracle database and JD Edwards EnterpriseOne Development Client using the procedures in this guide.

CAUTION: MICROSOFT DISCLAIMER ON DISABLING IPV6 **Important:** Internet Protocol version 6 (IPv6) is a mandatory part of Windows Vista and later versions. We do not recommend that you disable IPv6 or its components, or some Windows components may not function. For more information, see the "What are Microsoft's recommendations about disabling IPv6?" question in IPv6 for Microsoft Windows: Frequently Asked Questions at this link: <http://technet.microsoft.com/en-us/network/cc987595.aspx>

14 Appendix A - Working with ReconfigureDB.exe

Understanding the ReconfigureDB.exe Program

The installation of the Development Client delivers a utility called `ReconfigureDB.exe`. This program can be used by a database superuser who for Oracle is the user for the **SYSTEM** and **SYS** accounts, while for SQL Server Express (SSE) it is the user of the **SA** account. Only users of these accounts can encrypt and decrypt the password for the **local database** on the Development Client. Throughout this text, the term **local database** refers to the database that is installed directly on the Development Client. Depending on the release of EnterpriseOne, the supported database could be Oracle or SQL Server Express as specified in the Certifications for JD Edwards EnterpriseOne (refer to *Certifications* of this guide).

The **local database** password must be encrypted for JD Edwards EnterpriseOne to run on the Development Client. In order to provide security and uniqueness, JD Edwards EnterpriseOne generates this password using a combination of the serial number of the local C drive and a proprietary encryption algorithm. Therefore it is assured that this password will not be the same on different computers.

Tip: With EnterpriseOne Tools Release 9.2.0.0 and later and an Oracle local database, the method of creating the password changed to produce a more complex and secure password. In these notes and the `ReconfigureDB.exe` program, the old method is referred to as using **Legacy** encryption; whereas, the new method uses **Enhanced** encryption. **Important:** Enhanced encryption is applicable only to an Oracle local database when using Tools Release 9.2.0.0 and greater. Legacy encryption is used with an Oracle local database when using Tools Releases prior to 9.2.0.0 or with SQL Server Express (using any supported Tools Release). **Important:** Prior to running JD Edwards EnterpriseOne on the Development Client, you must ensure that the password of the superuser of the local database is set to the relevant encryption using `ReconfigureDB.exe`. This is done by selecting a program option appropriate for your database and Tools Release:

- **Enhanced Encryption**

You should use this option with the local Oracle database and Tools Release 9.2.0.0 and greater.

- **Legacy Encryption**

You should use this option with any local database and Tools Releases prior to 9.2.0.0.

You can also use this option with the SQL Server local database with any supported Tools Release.

Note: With Tools Release 9.2.0.0 and greater, the program for changing the password of the superuser of the local database is `ReconfigureDB.exe`. The program allows these password options:

- Plain Text
- Enhanced Encryption
- Legacy Encryption

Prior to Tools Release 9.2.0.0, the comparable program was called `ReconfigureMSDE.exe` and provided only the options for plain text and (Legacy) Encryption.

The `ReconfigureDB.exe` program runs in either interactive or silent mode. If no command-line options are given, the program launches a Graphical User Interface (GUI). If any command-line options are specified, the `ReconfigureDB.exe` program runs silently. In both cases, output from the program is written to this log:

`C:\ReconfigureDB.log`

You can determine the functionality and command syntax of the `ReconfigureDB.exe` program by executing the program with either the `/?` or `-H` options. For example:

`ReconfigureDB.exe /?`

Or

`ReconfigureDB.exe -H`

When you execute the command with these options the output is not directed to the console; instead the output is written to this file:

`c:\ReconfigureDB.log`

The contents of the `ReconfigureDB.log` file are shown below:

`ReconfigureDB.exe`

- 1) Changes the password for the database "superusers" for the LOCAL EnterpriseOne database.
- 2) Can change to or from an encrypted password which is needed for E1 to run. This password is generated based on the C drive's serial number and then encrypted based on E1 proprietary algorithms; hence, this password will not be the same on different computers.
- 3) Can also change to or from user-specified passwords.
- 4) The program works on the following local databases--and ONLY these databases:
 - E1Local
 - Type: Oracle Enterprise Edition (OEE)
 - Users: SYSTEM and SYS
 - JDESSELocal
 - Type: Microsoft SQL Server 2005 Express Edition (SSE)
 - User: SA

IMPORTANT NOTE: With EnterpriseOne Tools Release 9.2.0.0 and later, the method of creating the password changed to produce a more complex and secure password. In this program, the old method is referred to as using "Legacy" encryption; whereas, the new method uses "Enhanced" encryption.


```
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!  IMPORTANT !!! IMPORTANT !!! IMPORTANT !!! IMPORTANT !!! IMPORTANT !!!
!!!  The superuser password must be set to the E1 encrypted password    !!!
!!!  for E1 to work. Select "Enhanced" for Tools Release 9.2.0.0        !!!
!!!  and later. Select "Legacy" for older Tools Releases.              !!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
```

SYNTAX

ReconfigureDB [-options] [Old_Password|-E|-L] [New_Password|-E|-L]

LOG FILE

- The log file is C:\ReconfigureDB.log

OPTIONS

- May be preceded by either a slash (/) or hyphen (-).
- May be either upper- or lowercase.
- Include one space before the slash or hyphen.
- The order of the options is important. The old password (or option -E or -L) must come before the new password (or option -E or -L).
- If an old password (or option -E or -L) is given, a new password (or option -E or -L) must be given.
- If no options are provided, a GUI will prompt for the type of database and the passwords.

? or -H - Writes this help to the log file.
- Optional.

-T[ORACLE|SSE] - The database server instance type.
- Optional. If not specified, the default value is ORACLE.

Old_Password|-E|-L - May be one of the following:
1) Old password
2) -E = Indicates that old password was created using the ENHANCED (i.e., more complex) generation algorithm.
3) -L = Indicates that old password was created using the LEGACY (i.e., less complex) generation algorithm.

New_Password|-E|-L - May be one of the following:
1) New password
2) -E = Indicates that new password should be created using the ENHANCED (i.e., more complex) generation algorithm.
3) -L = Indicates that new password should be created using the LEGACY (i.e., less complex) generation algorithm.

EXAMPLE

In this example, the password for the JDESSELocal database SA user will be changed from "MyOldPassword" to a generated password that is then encrypted with the new enhanced method:

```
ReconfigureDB -TSSE MyOldPassword -E
```

Encrypting and Decrypting the Password of the Local Database

When the **local database** is Oracle, *JD Edwards EnterpriseOne* uses an encrypted password to connect to **E1Local** through the **SYSTEM** and **SYS** accounts.

When the **local database** is SQL Server Express, JD Edwards EnterpriseOne uses an encrypted password to connect to **JDESSELocal** through the **SA** account.

Some of the administrative database scripts on the Development Client decrypt this password before submitting database commands. Upon exit, such programs subsequently then re-encrypt the password. If one of these scripts fails to complete (for example, it is killed or it otherwise fails) before it can encrypt the password again, JD Edwards EnterpriseOne will not be able to connect to the database. You can determine if this is the case by attempting to sign into the local Oracle database using this command:

```
SQLPlus.exe system/admin@E1Local
```

where "admin" is the default password that the scripts use.

If you can sign in, the password must still be decrypted. You must re-encrypt the **SYSTEM**, **SYS**, or **SA** account password using the following steps for EnterpriseOne to operate correctly.

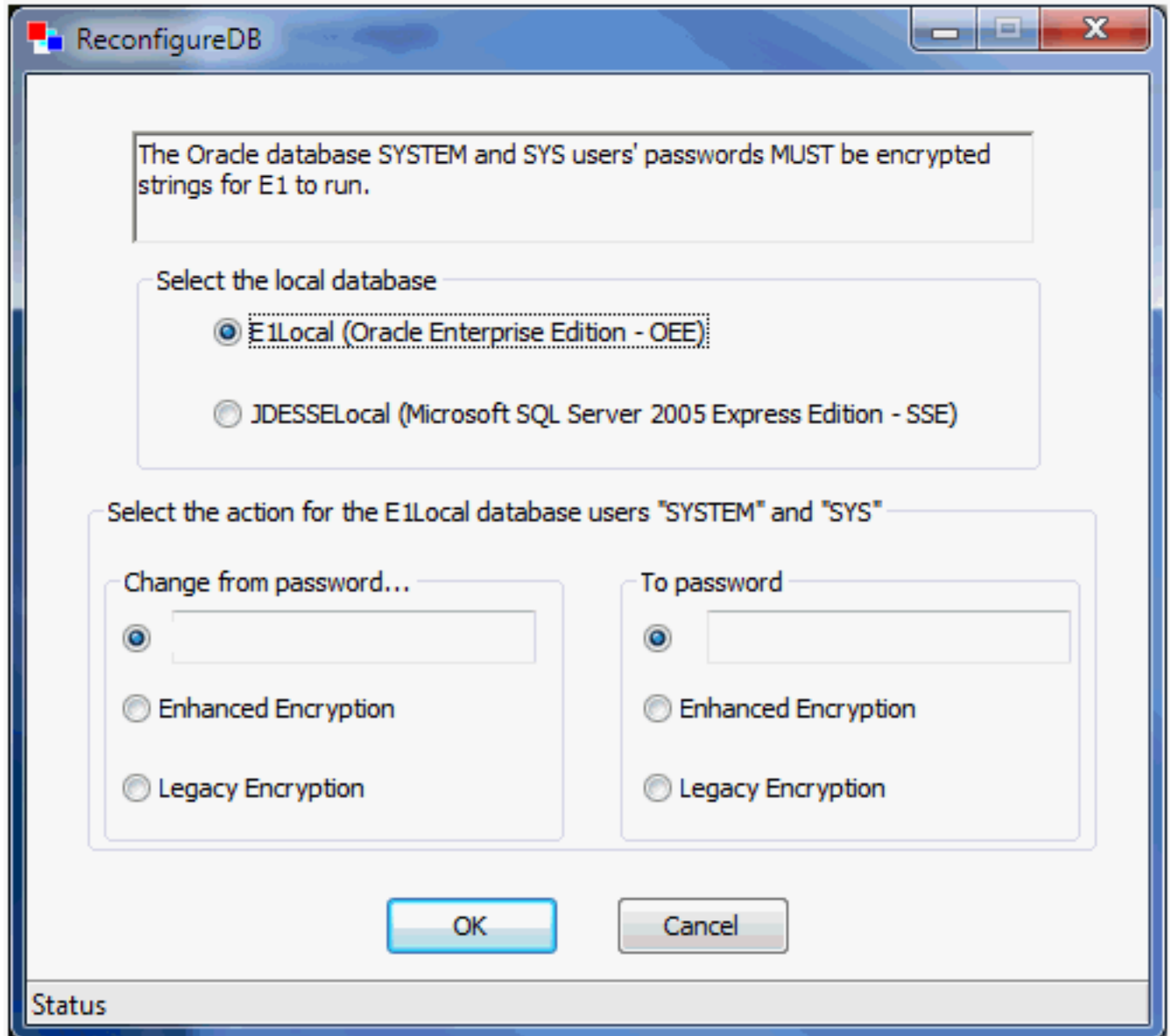
1. Launch the `ReconfigureDB.exe` program located in this directory:

```
<E1_install_dir>\system\bin32\ReconfigureDB.exe
```

Note: You do not have to right click on `ReconfigureDB.exe` and select **Run as administrator**. This is because this version of the program is designed to automatically attempt to start with the elevated permissions. If you are not signed into Windows with an administrative account, you will be prompted to enter the credentials for an administrative account.

If you do not specify any command line options, this program will launch in GUI mode and you can proceed as described in the following steps in this section. Optionally you can use command line options to execute `ReconfigureDB.exe` .

Tip: For details of syntax and command line options for `ReconfigureDB.exe` , refer to the preceding section in this document entitled: *Understanding the ReconfigureDB.exe Program*.



2. On the main ReconfigureDB screen, the **Select the local database section** lists the types of local databases that are currently installed; options for database types that are not installed will be inactive.
 - **E1Local (Oracle Enterprise Edition - OEE)**

This is the only valid option for JD Edwards Applications Release 9.1 (E910) and greater.
 - **JDESSELocal (Microsoft SQL Server 2005 Express Edition - SSE)**

You should choose this if the local database is SSE, which is a valid option in JD Edwards Applications Releases prior to 9.1 (E910).

3. In the **Select the action for the E1Local database users** section, the first column titled **Change from password...** indicates the old password; that is, the **from** password that you want to change. Select one of the available options:

- o **A plain text password**

Specify the password in the input field if you know that it was not generated with one of the two types of encryption. For security purposes, your keystrokes are displayed as asterisks.

- o **Enhanced Encryption**

Click this radio button if the old password was encrypted with the enhanced encryption that is applicable to a local Oracle database and Tools Release 9.2.0.0 or greater. This option uses an enhanced encryption algorithm (relative to prior releases) providing greater security for the local Oracle database.

- o **Legacy Encryption**

Click this radio button if the old password was encrypted with the legacy encryption that is applicable to the local databases which can be either:

- Oracle on Tools Release prior to 9.2.0.0
- SQL Server Express on any supported Tools Release

This option uses an older, less secure encryption algorithm (relative to later releases) providing less security for the local database.

4. The second column titled **To password** indicates the new password; that is, to what you want to change the password. Select one of the available options:

- o **A plain text password**

Use this option if you do not want to use either of the two types of encryption. For security purposes, your keystrokes are displayed as asterisks.

CAUTION: If you select the plain text password option, ensure that you re-encrypt the password before attempting to run JD Edwards EnterpriseOne. If the password is not encrypted with the correct type of encryption, JD Edwards EnterpriseOne will fail because it cannot access the local database.

Note: The password cannot contain any spaces. Spaces at the start or end of the password will be removed.

- o **Enhanced Encryption**

Click this radio button if the new password will be encrypted with the enhanced encryption that is applicable to a local Oracle database and Tools Release 9.2.0.0. The option uses an enhanced encryption algorithm (relative to prior releases) providing greater security for the local Oracle database.

- o **Legacy Encryption**

Click this radio button if the old password will be encrypted with the legacy encryption that is applicable to the local databases which can be either:

- Oracle on Tools Releases prior to 9.2.0.0
- or
- SQL Server Express on any supported Tools Release

This option uses an older, less secure encryption algorithm (relative to later releases) providing less security for the local database.

5. Click the **OK** button.

6. On Confirm Password, re-enter the password in the **New password:** field.

This is to confirm the new password for local database users which are **SYSTEM** and **SYS** for an Oracle database and **SA** for an SSE database.

The password value cannot contain a space character (blank). Attempting to do so causes this error to be displayed

7. Click the **OK** button.

A dialog box indicates that the password was successfully changed. Click the **OK** button to exit the dialog.

8. Watch the status bar at the bottom of the dialog for informational messages.

Tip: If changing the password fails, look in this log file for additional information: `c:\ReconfigureDB.log` Also, ensure you are using the correct password as perhaps the password you are trying is not what you thought it was. If neither of the above helps resolve a password failure, attempt to stop and restart these database services: Oracle Database

- OracleServiceE1LOCAL
- OracleE1LocalTNSListener

SSE Database

- JDESSELOCAL

After the database services are stopped and restarted, you can retry `ReconfigureDB.exe`.

15 Appendix B - Understanding Executable Files on the Development Client

JD Edwards EnterpriseOne Linked Executable Files

This section provides a list of linked executable files (executables) that are in the workstation `system/bin32` directory.

Linked executables:

- Are called by other JD Edwards EnterpriseOne programs.
- Are called by the JD Edwards EnterpriseOne kernel.
- Have no value if they are run independently of JD Edwards EnterpriseOne.
- Will not run unless they are called by JD Edwards EnterpriseOne.

This table includes descriptions and instructions for running the linked executable files:

Executable	Description	Call Details
Ap22.exe	Displays spreadsheets in a dialog box. This executable is obsolete and has no function in SP10 and beyond.	Obsolete.
BLC2Text.exe	Reads workstation JDEBLC spec files and generate a text file with details about each business function source file that is listed in the spec file.	Obsolete.
Dir2txt.exe	Takes a path and a text file name as arguments and places the directory name of the highest branch in the path into the text file.	Called from makefiles that are generated by BusBuild.
Drilldwn.exe	Used when generating Balance Auditor functions in Tabular reports.	Called by the JD Edwards EnterpriseOne UBE kernel.
DSArguments.exe	Used to create a CID argument when attempting to connect to a JD Edwards EnterpriseOne Data Source.	Called by the JD Edwards EnterpriseOne kernel.
GBLib.exe	BusBuild uses this program to determine whether the object files exist.	Called from makefiles generated by BusBuild.

Executable	Description	Call Details
InstMon.exe	Used during sign-in to install update packages if an update package is selected.	Called by the JD Edwards EnterpriseOne kernel.
JDEGenEx.exe	Generates a list of exports for each dll.	Called from makefiles that are generated by BusBuild.
Rtt.exe	Used by business partners only. Builds resource files for language translation. The risk is that the existing resource files could be confused with the newly generated files. The user would have to intentionally continue through multiple screens for this to happen.	Do not use this program.
Ubemon.exe	Monitored long-running UBEs and reported their completion. This program is obsolete and was disabled in SP10.	Obsolete.
Vdt.exe	Business View Design Tool creates business views.	Called from Object Librarian or Object Management Workbench (OMW).
ubep rint.exe	Not for direct customer use, although the JD Edwards EnterpriseOne product suite does use it.	Called by the JD Edwards EnterpriseOne kernel.
genver.exe	Creates the win32 version information for the build process.	Called by the JD Edwards EnterpriseOne kernel.
poda.exe	Processing Option Design Aid used to create processing options.	Called from OMW when you design a processing option.
RDA.exe	Report Design Aid used to create batch reports (UBE s).	Called from OMW when you design a batch application. RDA can also be opened without command line parameters.
FDA.exe	Form Design Aid (FDA) used to create interactive applications. FDA is currently configured to run on a fat client.	Called from the design window in OMW for an application.

Executable	Description	Call Details
JdeCabExtract.exe	Creates self-extracting.exe files.	JD Edwards internal tool.
JdeCompress.exe	Creates JD Edwards-compatible cabinet files.	JD Edwards internal tool.
pssg.exe	An obsolete file that is not called by any JD Edwards EnterpriseOne applications.	Obsolete.
GLBUILD.exe	Replaced by Busbuild.exe. It was used to build the business functions.	Obsolete.
krnlspec.exe	Generates jdekrnl.xdb and jdekrnl.ddb specs from the pristine database.	JD Edwards internal tool.

JD Edwards EnterpriseOne Standalone Executable Files

You can run standalone executable files directly from either the command line or through Windows Explorer.

This table includes descriptions and instructions for running the standalone executable files:

Executable	Description	Run Instructions
JDECOMConnector2.exe	Sets up COM connections to the server using the COM Connector product and only works in that context. Contact Customer Support for full documentation.	Run from the command line with a -regserver option.
LogViewer.exe	Employs a user friendly interface to view and modify plain ASCII JD Edwards EnterpriseOne files such as: <ul style="list-style-type: none"> • jdedebug.log • jde.log • olt.log • jde.ini 	Double-click the executable.
SnapShot.exe	Manages multiple workstation installations on the same PC.	Exit JD Edwards EnterpriseOne and then double-click the executable.

Executable	Description	Run Instructions
	See the chapter of this guide entitled: <i>Working With SnapShot on the Development Client</i> .	
Vercheck.exe	Displays, on one screen, the properties of all the files in a directory. The properties are the same as those that are displayed when you right-click a file and select Properties.	Open a DOS window, change the directory to the desired target, and double-click the executable.
GenCORBA.exe	Creates CORBA wrappers around JD Edwards EnterpriseOne business functions. This is a command line utility that requires a script file as an input. GenCORBA generates CORBA interfaces for JD Edwards EnterpriseOne business functions.	Syntax: GenCORBA[options] [libraries] For example: GenCORBA /Cat /UserID Devuser1 /Password Denuser1 / Environment ADEVHPO2 CAEC
GenJava.exe	Provides access to JD Edwards EnterpriseOne business functions by generating pure Java interfaces to them.	Run GenJava. Syntax: GenJava [options] [libraries] For example: GenJava /Cat /UserID Devuser1 /Password Denuser1 / Environment ADEVHPO2 CAEC
LaunchUBE.exe	Launches the UBE job stand-alone (not going through JD Edwards EnterpriseOne). It replaces the User Interface of UBEPrint.exe.	Double-click the executable or start using the command line.
VSMerge.exe	JD Edwards EnterpriseOne ER Compare tool used to compare and merge Event Rules (ER) for JD Edwards EnterpriseOne Applications, Reports, Table Conversions, NERs (Named Event Rules), and TERs (Table Event Rules). It also can be used to compare and merge C Business functions.	You can launch JD Edwards ER Compare tool from OMW or from the command line.
UTBrowse.exe	Displays the records in tables. We also use it to view local JD Edwards EnterpriseOne object specifications.	Type UTB in the EnterpriseOne Fast Path field or click the executable.

Executable	Description	Run Instructions
tda.exe	Modifies JD Edwards EnterpriseOne tables.	<p>On the Command Line, type tda.exe -idtablename, where tablename is the name of the table that you want to modify. For example, F0101.</p> <p>You do not need to run JD Edwards EnterpriseOne before running tda.</p>
tc.exe	The JD Edwards EnterpriseOne Table Conversion Design Tool used to design JD Edwards EnterpriseOne Table Conversion batch applications.	Double-click the executable, or run it from the command line using the optional parameter idXXXX, where XXXX is the name of an existing Table Conversion object.
tamtool.exe	<p>Can perform these functions:</p> <ul style="list-style-type: none"> • Recreate a tam file. • Copy a tam file. • Print index information. • Print the index key. • Verify the tam file. 	Run from the command line.
tampack.exe	<p>Backup utility in case tamftp.exe does not work for the customer. tampack.exe has about half the functionality of tamftp.exe.</p> <p>tampack.exe is included with the workstation and the deployment server. tampack.exe creates a translated copy of TAM files (RDASPEC.DDB, GBRSPEC.DDB, and so on) on the PC.</p> <p>The translated copies are known as pack files. When the program is finished, the user can manually run ftp.exe to transfer them to a remote enterprise server. When the pack files are on a remote enterprise server, the user can unpack them on the enterprise server.</p>	You must run tampack.exe from a DOS shell and pass in parameters.
pdf2pdl.exe	Converts PDF files into files containing the printer-specific protocol language for a selected printer. This application is intended only for development to troubleshoot problems with a customer's JD Edwards EnterpriseOne output. The tool can help solve configuration problems.	Double-click the executable.

Executable	Description	Run Instructions
activConsole.exe	Main EnterpriseOne interactive program.	Double-click the executable.
appgen.exe		Obsolete.
BsfnBuilder.exe	Builds business functions.	Obsolete.
Busbuild.exe	Builds business functions.	Double-click the executable.
Debugger.exe	Debug Event Rules (ER)	Called from the design window in OMW for an application.
EndEOneMobileUI.exe		Obsolete.
endnet.exe		Obsolete.
EOneMobileUI.exe		Obsolete.
Jdecltuni_Blanks.exe		Obsolete.
jdenet_n.exe		Obsolete.
Jdesnet.exe		Obsolete.
ReconfigureDB.exe	Set local database password.	Double-click the executable.
ServerAdministrationWorkbench.e	Monitored EnterpriseOne servers	Obsolete.

16 Appendix C - Understanding Microsoft Visual C++ Runtime Libraries

Microsoft Visual C++ Runtime Libraries Background

Note: All references to Microsoft Visual C++ refer to the defined JD Edwards EnterpriseOne minimum technical requirement Microsoft Windows platform compiler. Please refer to the Oracle Certifications to identify supported versions of the Microsoft Windows platform compiler for the JD Edwards EnterpriseOne Client.

When you build new packages using the Microsoft Visual C++ compiler, you must ensure that all machines receiving these packages have the corresponding runtime libraries installed. Assuming Microsoft makes a new service pack available or requires an update for its Microsoft Visual C++ compiler and it is installed on your JD Edwards EnterpriseOne Microsoft Windows build machines, you must do the following:

- Ensure that all JD Edwards EnterpriseOne Microsoft Windows build machines, both servers and workstations, have the identical compiler service pack release levels installed.
- Distribute the new Microsoft Visual C++ runtime libraries to all Microsoft Windows machines that are receiving packages built by Microsoft Visual C++ and do not have a compiler installed.

Note: You can download the latest SP (service pack) from the Microsoft Download Center.

Redistribution of Microsoft Visual C++ Runtime Libraries

All JD Edwards EnterpriseOne Microsoft Windows machines receiving application foundation packages require the runtime libraries to be installed.

The absence of the Microsoft Visual C++ runtime libraries from a machine using a JD Edwards EnterpriseOne application foundation package built by the same compiler will result in "Business function Library load failed..." error messages. Once the Microsoft Visual C++ runtime libraries are installed on a Microsoft Windows machine, only new service pack updates or Microsoft Updates to the Microsoft Visual C++ compiler require redistribution of new runtime libraries.

Note: Please refer to the JD Edwards EnterpriseOne defined Microsoft Windows platform compiler minimum technical requirements in Oracle Certifications.

A Microsoft or third-party system management tool such as SMS can be used to distribute the Microsoft Visual C++ runtime libraries. This is generally the recommended approach for the distribution of Microsoft packaged products. The JD Edwards EnterpriseOne package build feature can also be used to push Microsoft's redistributable runtime library package to all Microsoft Windows client machines. Delivery of Microsoft Visual C++ runtime libraries for JD Edwards EnterpriseOne enterprise, logic, application, or batch servers is also explained in this appendix.

Creating a Visual Studio Runtime Library Package Feature

The JD Edwards EnterpriseOne package build feature makes it possible to distribute third party applications with the deployment of a client package. Create a package feature for the Microsoft Visual C++ compiler runtime libraries to leverage this facility.

The Deployment Server should have a copy of the compatible `vc_redist_x86.exe`. The **x86** indicates that this installs 32-bit runtime libraries-which is exactly what JD Edwards EnterpriseOne needs because the JD Edwards EnterpriseOne programs on the Development Client are 32-bit programs. For example, the Runtime Libraries installer for the 2013 compiler release is:

```
C:\Program Files (x86)\Microsoft Visual Studio 12.0\VC\redist\1033\vc_redist_x86.exe
```

Note the string **12.0** in the path even though it is for Visual Studio 2013.

To create a Visual Studio runtime library package feature:

1. On the deployment server, open Windows Explorer and navigate to your JD Edwards EnterpriseOne solution's shared folder. For example, E920.
2. Expand the shared node and open **OneWorld Client Installs\ThirdParty**.
3. Under the folder ThirdParty, create a new folder with the name **VS20xxRTL** (xx is equal to the current version).
4. Locate and copy the `vc_redist_x86.exe` file from your installed compiler path.
5. Paste the `vc_redist_x86.exe` file into the VS20xxRTL folder.
6. Log into the deployment server's DEP900 environment.
7. Fast path to menu GH9083, Package and Deployment Tools, and select the Package Assembly application.
8. On the Work with Packages form, select Form and then Features.
9. On the Work with Features form, click Add.
10. Click Next to begin the Feature Based Deployment Director.
11. On the Feature Information form, complete these fields and click Next:

Field	Value
Feature	VS20xx_RTL where you will replace xx with the version number.
Feature Type	1
Description	Visual C++ 20xx Runtime Libraries where you will replace xx with the version number.
Feature Installation Options	Required
Components	Additional Install Processes

Field	Value

12. On the Additional Install Processes form, select the Execute After Install option.
13. Complete these fields and click Next:

Field	Value
Third Party	VS20xxRTL
Description	Visual C++ 20xx Runtime Libraries where you will replace xx with the version number.
Sequence	1
Executable Name	vcredist_x64.exe (for 64-bit Development Clients) vcredist_x86.exe (for 64-bit Development Clients) This is the name of the executable file found in this directory: ... \ThirdParty\VS20xxRTL
Source Path	\\<deploymentservername>\E900\OneWorld Client Install\ThirdParty\VS20xxRTL Note: Do not use the Select Directory browse function to obtain the aforementioned path. Instead type the UNC path or cut and paste the Universal Naming Convention (UNC) path from Windows Explorer into the Source Path field.
Parameters	/Q /Q denotes Quiet Mode and does not require any user intervention.

14. Click Save to preserve the feature settings and then click Next to continue.
15. On the Feature Summary form, click End to complete the feature definition.

Note: If you expand the nodes describing each package feature you may inspect the feature definition. You may notice that the UNC share path has been truncated for your newly created entry. This is NOT an issue as this line entry serves only as a description. The complete UNC share path has been properly preserved in System table F96604.

Creating an Update Package with the Visual Studio Runtime Library Feature

Once the Visual Studio runtime library package feature has been created, it can be associated with either an update or full package. Creating an update package containing this feature will cause the full parent package assembly information to include this same feature.

To create an update package with the Visual Studio runtime library feature:

1. Go to menu GH9083, Package and Deployment Tools, and select the Package Assembly application.
2. On the Work with Packages form, click Add.
3. On the Package Assembly Director, click Next to begin the package assembly process.
4. On the Package Information form, select the Express option, complete these fields, and click Next:

Field	Example Value
Package Name	DV20xxRTL where you will replace xx with the version number.
Description	Visual C++ 20xx RTL for DV where you will replace xx with the version number.
Path Code	DV900

5. On the Package Component Revisions form, select the Update option and type or select the parent package. For example, **DV900FA**.
6. Click the Features button.
7. On the Features Components form, click the Browse button.
8. On the Feature Component Selection form, click Find.
9. Highlight the entry associated with VS20xx_RTL and click Select to mark the entry with a check mark.
10. Click Close and Close again to return to the Package Component Revisions form.
11. Verify that the form shows "Individual Features Selected" and click End to complete the package assembly process.
12. On the Work with Packages form, select Row and Active/Inactive to activate the package.

Building and Deploying an Update Package with the Visual Studio Runtime Library Feature

After creating the update package, you will need to build and deploy the package. To build and deploy an update package with the VS2013 runtime library feature:

1. Highlight your package and select Row and Define Build.
2. On the Package Build Definition Director, click Next to begin the build definition process.
3. On the Package Build Revisions form, ensure that the Build Location Client check box is checked and click Next.
4. On the Build Features tab, select the Build Feature INFs option.
5. On the Package Build Revisions form, click End to complete the build definition process.
6. On the Work with Package Build Definition form, select Row and Active/Inactive to activate the package build definition.
7. Select Row and Submit Build to build the package.
8. On the Report Output Destination form, select On Screen and click OK.
9. Once the package build has completed, review the R9622C PDF report file to verify that the build completed successfully.

The successful package build with the included package feature results in the creation of a feature-specific INF file.

10. After building the package, the appropriate person must approve it for client deployment.

Afterwards, both the update and associated parent package will automatically include the Microsoft Visual C++ runtime libraries as part of the client installation process.

Since this feature was configured to install in Quiet Mode (/Q), it does not require any user intervention. If the Microsoft Visual C++ runtime libraries are already installed on the machine, the feature-specific installer will exit.

17 Appendix D - Installing a Development Client from the Command Line

Installing a Development Client from the Command Line

CAUTION: Be sure to follow the guidelines in the preceding sections of this guide entitled:

- *Microsoft Windows Security*
- *Minimizing Locked Files*

Instead of using the OUI-based installer in interactive mode for the Development Client, optionally you can run the installation from the Microsoft Windows command line. This may be more efficient if you have many Development Clients that you need to install.

The OUI installer for the Development Client is `setup.exe`, which is located in this directory:

```
\\<deployment server name>\<release>\OneWorld Client Install\install
```

You can provide options to the `setup.exe` on the command line. Most of the options are generic OUI options, but a few are specific to the EnterpriseOne Development Client installer.

You can enter the following line to get a list of and descriptions of the generic OUI options:

```
\\<deployment server name>\<release>\OneWorld Client Install\install\setup.exe -help
```

Below is an example command line string using some of the available options (which are listed and described later in this section). The command should be entered on a single contiguous line with no line breaks or returns:

```
setup.exe -debug -force PACKAGE_NAME=DV920FA E1_INSTALL_MODE=Compact ORACLE_HOME=c:\E920  
ORACLE_HOME_NAME=JDE_E920_Client
```

Below is a list of the most useful generic OUI options:

- `-logLevel`
- `-debug`
- `-force`
- `-help`
- `-silent`
- `ORACLE_HOME`
 - Directory where EnterpriseOne will be installed
 - Required
 - Must be of the form `ORACLE_HOME=installation_directory`

- o Case sensitive
- ORACLE_HOME_NAME
 - o Name of the Oracle Home directory.
 - o Required
 - o Must be of the form ORACLE_HOME_NAME=name
 - o Case sensitive

Note: Any generic options other than those listed above have not been tested with the EnterpriseOne Development Client installer. The EnterpriseOne-specific options are specified as KEY=value pairs. The keys are case sensitive.

The following table lists the command line options for OUI for the Development Client.

Key	Description	Value Case Sensitive?	Required?	Example
E1_USER	EnterpriseOne user account.	No	Yes, if installing an update package that has XML specs stored in the database.	E1_USER=JDE
E1_PASSWORD	EnterpriseOne user password. Must be specified in plain text; it cannot be encrypted).	Yes	Yes, if installing an update package that has XML specs stored in the database.	E1_PASSWORD=Password
PACKAGE_NAME	Name of package to install.	Yes	Yes	PACKAGE_NAME=DV920FA
E1_INSTALL_MODE	Indicates which EnterpriseOne objects to include in the installation. Valid values are Typical = include the pathcode's development and production objects (default). Compact = include the pathcode's production objects only.	Yes	No	E1_INSTALL_MODE=Compact
COPY_FILES	Specifies whether package's files should be copied to the target. Valid values are	No	No	COPY_FILES=Y

Key	Description	Value Case Sensitive?	Required?	Example
	<p>A string starting with 'N', 'n', 'F', or 'f' = do not copy the files</p> <p>Any other string = copy the files (default)</p> <p>Useful if you are repeating an installation that failed after all files were copied to the target machine.</p>			

18 Appendix E - Uninstalling a Development Client from the Command Line

Uninstalling a Development Client from the Command Line

This appendix describes how to uninstall the JD Edwards EnterpriseOne Development Client from the command line.

CAUTION: Be sure to follow the guidelines in the preceding sections of this guide entitled:

- *Microsoft Windows Security*
- *Minimizing Locked Files*

Instead of using the OUI-based installer in interactive mode to uninstall the Development Client, you can optionally perform a silent deinstall by running OUI from the Microsoft Windows command line. This may be more efficient if you have many Development Clients that you need to uninstall.

Although any copy of OUI that you have on your machine may be used for the uninstallation, we recommend that you use the particular one that was automatically copied to your machine when you installed the Development Client. This copy of OUI is `setup.exe`, which is located in this directory:

```
<dev_client_installation_directory>\oui\bin
```

To uninstall the Development Client using the command line:

Note: The local database of the Development Client may or may not be running. When you use OUI as described in this procedure, it will attempt to start the database if it is not already running.

1. Right-click on an icon to open a command prompt window and click "**Run as Administrator**".

2. Enter and run the following command on one line:

```
"<location_of_OUI>\setup.exe" -deinstall -nowait -waitforcompletion  
REMOVE_HOMES={"<Oracle_Home_directory_to_remove>} -silent  
ORACLE_HOME_NAME="<Oracle_Home_Name_to_remove>"
```

where

- <location_of_OUI> is the directory where `setup.exe` resides; for example, `c:\E920_1\oui\bin`
- <Oracle_Home_directory_to_remove> is the directory of the **Oracle_Home** to uninstall; for example, `c:\E920_1`
- <Oracle_Home_Name_to_remove> is the name of the **Oracle_Home** to deinstall; for example, **JDE_E920_Client1**

Note: Be sure to include all punctuation (that is, double quotes and curly braces) in the above command line except for the greater than and less than signs that are used to delimit the variables. The words `REMOVE_HOMES` and `ORACLE_HOME_NAME` must be capitalized. There are no spaces in the option switches between the hyphen and the name of the option switch (for example, `-nowait`).

For example, a command line entry to uninstall the Development Client might be:

```
"C:\E920_1\oui\bin\setup.exe" -deinstall -nowait -waitforcompletion REMOVE_HOMES={"C:\E920_1"} -silent  
ORACLE_HOME_NAME="JDE_E920_Client1"
```

3. Examine the latest log file in the appropriate directory:

- **64-bit Development Client**

```
C:\Program Files\Oracle\Inventory\logs
```

- **32-bit Development Client**

4. Verify that the **Oracle_Home** directory (for example, `c:\E920_1`) was deleted. If not, delete it.

You can provide additional options to the `setup.exe` on the command line. Most of the options are generic OUI options, but those listed above must be used at a minimum.

You can enter the following line to get a list of and descriptions of the generic OUI options:

```
<location_of_OUI>\setup.exe -help
```

Note: Any options other than those listed above have not been tested with the JD Edwards EnterpriseOne Development Client installer or uninstaller.

19 Appendix F - Manual Cleanup of an Uninstalled Development Client

Manual Cleanup of an Uninstalled Development Client

CAUTION: Be sure to follow the guidelines in the preceding sections of this guide entitled:

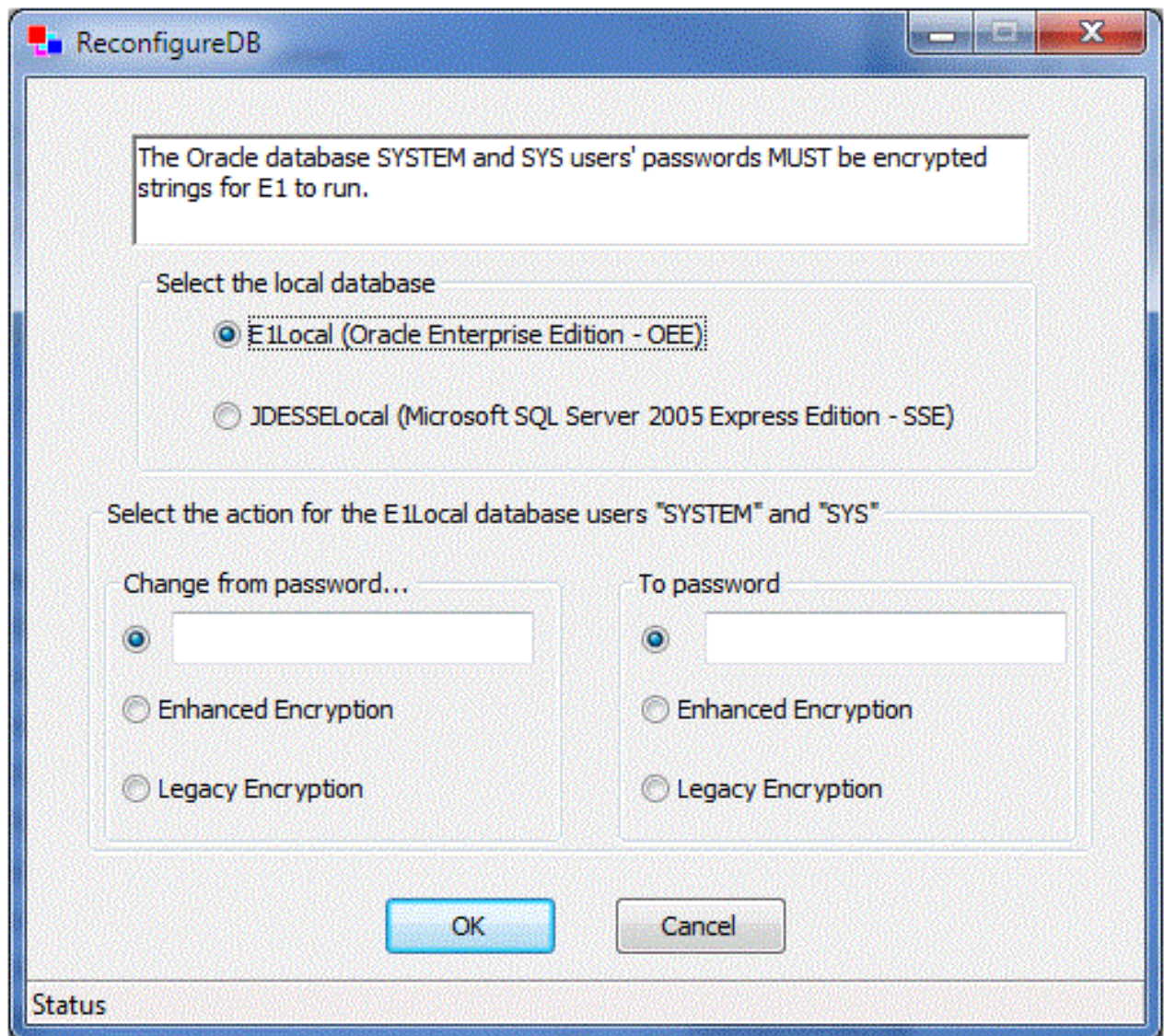
- *Microsoft Windows Security*
- *Minimizing Locked Files*

If the uninstallation of the Development Client fails for some reason, you need to perform the manual steps in this procedure to completely remove the old installation before reinstalling the Development Client.

1. Export the OEE tablespaces.
 - a. Decrypt the database password by running this program:

```
c:\E920\system\bin32\ReconfigureDB.exe
```

Note: This program is available in Tools Releases 9.2 and higher. For Tools 9.1, the program is called `ReconfigureMSDE.exe`. Note that regardless of the fact that the program has the name has "MSDE" in it, it also works with OEE and SSE. The difference between `ReconfigureDB` and `ReconfigureMSDE` is that `ReconfigureDB` includes the options to change to or from Enhanced encryption. Only one type of encryption is available in `ReconfigureMSDE` and is the same as Legacy encryption in `ReconfigureDB`.



- b. Near the top, select the type of local database.

- c. Under Change from password, turn on the appropriate encryption type: .
 - If the Tools Release is 9.2 or higher and OEE is used, select **Enhanced Encryption**.
 - ii. All other cases, select **Legacy Encryption**.
- d. In the **To password** text field, enter a password that you will remember.
- e. Click the **OK** button.
- f. Perform the below steps.

- i. Open a command prompt window with **Run as administrator**.

- ii. Enter this command:

```
set ORACLE_HOME=c:\Oracle\E1Local
```

- iii. Enter this command:

```
sqlplus sys as sysdba
```

- iv. When prompted, enter the password that you specified in `ReconfigureDB.exe`.

- v. Enter this command:

```
select unique tablespace_name from all_tables;
```

- vi. Note the EnterpriseOne tablespace names.

- vii. Repeat this command for each EnterpriseOne tablespace:

```
drop tablespace <tablespace_name> including contents and datafiles;
```

- viii. Enter this command:

```
shutdown;
```

- ix. Enter this command:

```
startup;
```

- x. Exit the command prompt window.

2. Delete the following registry keys, where `<JDE_Client_Oracle_Home_Name>` is the name of the Oracle Home for the Development Client that you specified during installation.

```
\HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ORACLE\KEY_<JDE_Client_Oracle_Home_Name>
```

3. Delete the following registry keys:

```
\HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\JDEdwards\BPMBroker
```

```
\HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\JDEdwards\HTMLWebServer
```

```
\HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\JDEdwards\OneWorld
```

4. Delete the installation directory for the Development Client (for example, `c:\E920_1`).

If you cannot delete the installation directory because a file in that directory is locked, follow these steps:

- a. Determine which file is locked and which process has the lock on the file. A freeware program called Process Explorer can be helpful in determining this information. You can obtain a free copy of Process Explorer from this web site:

<http://technet.microsoft.com/en-us/sysinternals>

- b. Either kill the locking process with Process Explorer or Microsoft Windows Task Manager or, if the process was started as a Microsoft Windows service, change the Startup Type to Manual and reboot the computer.
- c. Try again to delete the E1Local subdirectory.

5. Remove the Oracle inventory entries.

- a. With a text editor (such as Notepad), edit the appropriate file:

- **64-bit Development Client**

`c:\Program Files\Oracle\inventory\ContentsXML\inventory.xml`

- **32-bit Development Client**

`c:\Program Files (x86)\Oracle\inventory\ContentsXML\inventory.xml`

- b. Delete any lines that start with:

`<HOME NAME="JDE_Client_Home_Name"`

where `JDE_Client_Home_Name` is the name that you gave the installation directory when you installed the Development Client.

- c. Save the file.

6. Remove the entry from the Windows PATH.

- a. From Windows' Start button, go to Control Panel / System.
- b. Click **Advanced** system settings on the left.
- c. Click **Environment Variables...** near the bottom.
- d. In the System variables box near the bottom, highlight Path and click the **Edit...** button.
- e. In the Variable value field, delete the value `<JDE_Client_Home>\system\bin32` where `<JDE_Client_Home>` is the path that you specified when you installed the Development Client. Be sure to remove the semicolon as well.
- f. In the Variable value field, delete the value `<JDE_Client_Home>\<pathcode>\bin32` where `<pathcode>` is the name of an installed pathcode. Be sure to remove the semicolon as well. Repeat this for each pathcode that you installed.
- g. Click OK.

7. Remove the **JDE_B9_ICU_DATA** Windows environment variable.

- a. Navigate to Control Panel > System.
- b. Click Advanced system settings on the left.
- c. Click **Environment Variables...** near the bottom.
- d. In the System variables box near the bottom, highlight `JDE_B9_ICU_DATA` and click Delete.
- e. Click OK.

20 Appendix G - Manual Cleanup of an Uninstalled Oracle Database

Manual Cleanup of an Uninstalled Oracle Database

If the uninstallation of the OEE database fails for some reason, you need to perform the manual steps in this procedure to completely remove the old installation before reinstalling the database. These steps apply to either 12c or 11gR2 releases of the OEE database.

1. Uninstall the Development Client.

Be sure the Development Client is uninstalled or saved using the SnapShot program before attempting to uninstall the database. This should ensure that no EnterpriseOne tablespaces are imported (attached) to the OEE database.

2. Stop the database services from Control Panel:

- o OracleE1LocalTNSListener
- o OracleServiceE1LOCAL

3. Be sure no Oracle processes from the `c:\Oracle\E1Local` directory are running.

4. Delete the following registry keys:

```
\HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\KEY_E1Local
```

```
\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\services\ (see Keys below)
```

Keys. Delete any keys with names that start with the string **Oracle** and contain the string **E1Local**.

```
\HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ORACLE\KEY_E1Local
```

where this key may or may not exist.

5. Delete these directories:

```
c:\Oracle\E1Local
```

```
c:\Oracle\oradata\E1Local
```

If you cannot delete the E1Local subdirectory because a file in that directory is locked, follow these steps:

- a. Determine which file is locked and which process has the lock on the file. A freeware program called Process Explorer can be helpful in determining this information. You can obtain a free copy of Process Explorer from this web site:

<http://technet.microsoft.com/en-us/sysinternals>

- b. Either kill the locking process with Process Explorer or Microsoft Windows Task Manager or, if the process was started as a Microsoft Windows service, change the Startup Type to Manual and reboot the computer again.

- c. Try again to delete the E1Local subdirectory.

6. Remove the Oracle inventory entries.

- a. With a text editor (such as Notepad), edit this file:

```
c:\Program Files\Oracle\inventory\ContentsXML\inventory.xml
```

- b. Delete any lines that start with:

```
<HOME NAME="E1Local"
```

- c. Save the file.

7. Remove the entry from the Windows PATH.

- a. Navigate to Control Panel > System.
- b. Click **Advanced** system settings on the left.
- c. Click **Environment Variables...** near the bottom.
- d. In the System variables box near the bottom, highlight Path and click the **Edit...** button.
- e. In the Variable value field, delete this value:

```
c:\Oracle\E1Local\bin
```

Be sure to remove the semicolon as well.

- f. Click OK.

8. Remove the ORACLE_HOME Windows environment variable.

- a. Navigate to Control Panel > System.
- b. Click **Advanced** system settings on the left.
- c. Click **Environment Variables...** near the bottom.
- d. In the System variables box near the bottom, highlight **ORACLE_HOME** and click Delete.
- e. Click OK.

21 Appendix H - Installing Multiple Pathcodes

Installing Multiple Pathcodes

If you install a full package with a given pathcode and later install another full package with a different pathcode, the already installed foundation will be removed before the second package is installed. If the foundation for the second package is not the same one with which the first pathcode's business functions were built, you may need to rebuild the business functions for the first pathcode.

When installing multiple full packages with different pathcodes on a workstation, the settings in the ini files (`jde.ini`, `jdbj.ini`, etc.) and registry will match those from the last package to be installed. The initial (bootstrap) settings for the JD Edwards EnterpriseOne Development Client are read from the ini files; however, when you sign into EnterpriseOne, you can select from a list of available environments. This list of environments is dependent upon the installed pathcodes. If the selected environment does not match the bootstrap environment or pathcode in the ini files, JD Edwards EnterpriseOne will be reinitialized with the new environment and pathcode after sign in.

22 Appendix I - Mixing Releases of EnterpriseOne Development Client and OEE

Mixing Releases of EnterpriseOne Development Client and OEE

This document concentrates on using the latest releases of E1 Tools, E1 Applications (Apps), and OEE (Oracle Enterprise Edition database which is installed on the Development Client). These releases are documented in Oracle's Certifications. However in some cases, it is possible to mix old or new releases of E1 with various versions of the OEE database. For example, an Apps 9.1 package can be installed on a computer with OEE 12c or 11gR2 installed.

Special Considerations for Mixing Releases of the Various Products

This section discusses these special considerations that need to be observed when mixing releases of the various products:

- The Development Client installers are the same release as the E1 Tools Release, which is the release of the **foundation** or **system**.
For example, if the E1 foundation is Release 9.2.3, the installers that you run to install the Development Client and H4A Web Client are also at Release 9.2.3.
- E1 Tools Release 9.2.x and Apps Release 9.2 are compatible; however, a given Tools Release may be applied to the same or an older Apps Release, where older Apps Releases are defined as the previous two releases.
For example, Tools Release 9.2.0 can be applied to Apps Releases 9.2, 9.1, or 9.0.
- The releases of non-E1 products that are supported by E1 are based on the E1 Apps Release.
Examples include:
 - Apps Release 9.2 can be installed on a machine with OEE 12c installed.
 - Apps Release 9.1 can be installed on a machine with either OEE 12c or 11gR2 installed.
 - Apps Release 9.0 can be installed on a machine with OEE 10g installed.

Local Database Password Considerations

JD Edwards EnterpriseOne installers and foundation connect to the local Oracle database (OEE) using the database users SYSTEM and SYS. The passwords for both of these users are the same and are generated and then encrypted by E1.

If the local database is SQL Server Express (which is supported only with Apps Release 9.0), E1 connects with the **sa** account. This password for this account is also generated and then encrypted by E1.

This section discusses these topics:

- *Local Oracle Database Password Changed*
- *Local Oracle Database Password Must Be Compatible with E1 Tools Release*

Local Oracle Database Password Changed

With JD Edwards EnterpriseOne Tools Release 9.2.0.0 and later and when using a local Oracle database (OEE), the method of creating the password of the database SYSTEM and SYS users changed to produce a more complex and secure password. The old method is referred to as using Legacy encryption; whereas, the new method uses Enhanced encryption.

These passwords (for the Oracle SYSTEM and SYS users) can be set and changed to either the Legacy encryption or Enhanced encryption by a program called `ReconfigureDB.exe`. The `ReconfigureDB.exe` program is found only in the `system\bin32` directory of a Tools Release 9.2.0.0 or higher. For more information refer to the section of this guide entitled: *Understanding the ReconfigureDB.exe Program*.

Local Oracle Database Password Must Be Compatible with E1 Tools Release

The OEE 12c installer initially sets the SYSTEM and SYS users to use Enhanced encryption; whereas, the OEE 11gR2 installer sets the passwords to Legacy encryption. The SQL Server Express (SSE) installer continues to use only Legacy encryption.

Note: Because the SQL Server Express password encryption did not change with Tools Release 9.2, SQL Server Express will not be discussed further in this document.

The E1 Development Client installer and foundation need to connect to the local database. The password that is set for OEE needs to match the Tools Release of the installer and foundation.

The following scenarios lists the steps required when installing various releases of the OEE database and E1 Development Client.

- *Scenario 1: OEE 12c with Tools Release 9.2*
- *Scenario 2: OEE 12c with Tools Release 9.1*
- *Scenario 3: OEE 11gR2; Tools Release 9.1*

Scenario 1: OEE 12c with Tools Release 9.2

To support this mixture of products and releases:

1. Install OEE 12c, where the installer sets password to Enhanced encryption.
2. Install the Development Client using the Tools Release 9.2 installer, which requires Enhanced encryption.
3. Run E1 on Development Client using Tools Release 9.2 foundation, where that foundation requires Enhanced encryption.

Scenario 2: OEE 12c with Tools Release 9.1

To support this mixture of products and releases:

1. Install OEE 12c, where the installer sets password to Enhanced encryption.
2. Run `ReconfigureDB.exe` to change password from Enhanced to Legacy encryption.
3. Install Development Client using Tools Release 9.1 installer, which requires Legacy encryption.
4. Run E1 on Development Client using Tools Release 9.1 foundation, where that foundation requires Legacy encryption.

Scenario 3: OEE 11gR2; Tools Release 9.1

To support this mixture of products and releases:

1. Install OEE 11gR2, where the installer sets password to Legacy encryption.
2. Install Development Client using Tools Release 9.1, where the installer requires Legacy encryption.
3. Run E1 on Development Client using Tools Release 9.1 foundation, where that foundation requires Legacy encryption.

